



## MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.



## I.—PHILOSOPHIC DOUBT.

MR. A. J. Balfour's recent *Defence of Philosophic Doubt* (Macmillan, 1879) is a book for which his antagonists may well feel grateful. I mean nothing equivocal. It is good to have the foundations of belief thoroughly probed by an acute thinker, who says what he thinks as clearly and concisely as possible. Nobody can suppose that the last word has yet been said upon the topics which he discusses, and Mr. Balfour's investigations may stimulate even those readers who do not accept his sceptical conclusions. They may hold that scientific opinions cannot be really injured even by the exposure of contradictions in the statement of the first principles which they are supposed to involve, for a clear definition of first principles is rather the ultimate goal of thought than its primary starting-point. Mr. Balfour himself says that he shares the confidence of men of science in the validity of their conclusions. He considers, indeed, that scientific belief rests upon a "healthy instinct," rather than a strict logical basis; but for many purposes it matters little which name we give to the intellectual process involved.

Mr. Balfour, however, draws another inference, which it seems to be his main purpose to establish. He wishes to put theology on a level with science, and to rebuke the dogmatism of the scientific. Many theological writers have endeavoured in different ways to turn philosophical scepticism to account.

They have tried to parallel their own mysteries by mathematical or philosophical antinomies, and have declared the dogmatism of their opponents to be as irrational as their own. But Mr. Balfour's method is, so far as I know, as original as it is certainly ingenious. It is hardly calculated, as he admits, to appeal to the vulgar, and requires very skilful handling if it is not to be as dangerous to friends as to foes. In any case, whether as a mere intellectual puzzle or a serious defence of theological assumptions, the argument is well worth consideration. I could hardly follow Mr. Balfour over the whole field of controversy without writing a book at least as large as his own. I propose in the following pages to indicate as shortly as I can some of the objections which I should be disposed to develop, if ampler treatment were possible.

Mr. Balfour attacks the various theories of knowledge characteristic of the Empirical, the Transcendental, and the Common Sense schools, and exposes their self-contradictions. He urges that even if we granted the positions which he denies, we could still know little of the world's history; he maintains that, on the same hypothesis, the conclusions drawn by men of science become unintelligible when confronted with their first principles, and he then explains briefly the position of the rival creed. Theological belief rests, according to him, upon a "kind of inward inclination or impulse" (p. 317), which is as valid within its own sphere as the healthy "instinct" of science, or rather is fundamentally of the same nature. The two systems, however, rest "in the main upon separate bases" (p. 322); they may continue to stand "side by side" (p. 320); and if complete conciliation be impossible, it is better to be inconsistent than to destroy either of the conflicting creeds.

Mr. Balfour is content to treat very slightly the constructive part of this theory, and hardly gives materials for detailed criticism. I could adopt much of his language, though to me it bears a rather different meaning. Religion most undoubtedly corresponds to an "inward inclination," or how could religions thrive? The inclination, again, is a "practical cause of belief". That is what the opponents of theology have always been saying. Every belief that has ever existed has some "practical cause," and the difficulty is that, as Mr. Balfour observes, a cause of belief is often very different from a reason for belief. I need give no examples to prove that we often listen to our feelings when we ought to listen to our reason; and we should all agree to condemn the process as illegitimate in any political or judicial question. I should like, therefore, to know how Mr. Balfour distinguishes the impulses which rightfully cause us to believe in a religion, from those impulses which wrongfully cause us to

believe (for example) in the wickedness of an enemy. What kind of criterion can be suggested as to the legitimacy of such impulses? If no criterion can be suggested, we are brought to a scepticism which, if not suicidal, is all-embracing. If knowledge is not essentially contradictory, belief is essentially arbitrary. On the other hand, if any criterion be available, I should like to know how it can be distinguished from that which is available in the case of the scientific belief. Is it not the very same thing?

There is, indeed, an impulse which corresponds to Mr Balfour's description, but it is one which seems to me to have no direct logical value at all. It is simply a name for the emotions which are gratified by any form of religion, and which may be in favour of any form against any other. Their association with any specific creed is not indissoluble, and it at least requires to be proved that they are not capable of being entirely divorced from all theology. Mr. Balfour, by generally identifying religion with theology, seems to assume the impossibility of this divorce; but his opponents would certainly not grant his position. The impulse, according to them, may tell not merely in favour of any theological creed against another, but in favour of positivism as against all theological creeds. The revolt against religions must have the same logical value as the tendency of religions to persist. And, therefore, if the impulse is to be counted at all as a reason for believing, it is as much a reason for believing atheism as theism. The theologian must henceforth be content to say "believe," whilst interpreting it to mean, "believe what you like;" and, therefore, if you like, be an atheist. If he is content with this position, the atheist would probably have little objection to make; and it seems to be the most legitimate result of Mr. Balfour's method. All creeds are to be regarded as on the same basis, and therefore, he seems to think, most people will choose some form of theology.

But I have now to ask whether, upon this showing, any argument can really be made out for placing theology on the same level with scientific belief.

Mr. Balfour speaks as though theology and science formed two different codes of belief, each perfectly coherent, each resting upon its own base—logical or otherwise—and yet partially overlapping, and in the overlapping portions partially inconsistent. The assumption appears to me to be at every point untenable. The great cause of disbelief has not been the conflict between theology and science, but the hopeless and interminable conflicts between theologians themselves. It is not merely that existing religions conflict with each other, that Protestants and Catholics, Christians and Mahomedans, Buddhists and Hindoos, and so

forth, deny each others' claims, and frequently go so far as to pronounce each other to be atheists. This phenomenon might be compatible with the existence of some common element in the different creeds; and, accordingly, the attempt to extract such an element has been the great aim of one large body of religious believers, who have never been able to settle what it was, and whose very attempt has caused them to be denounced as deists and atheists (the two names, it is well known, are synonymous) by the adherents of each particular sect. But this is the natural result of the fact—palpable and obvious—that theology is the common name of many creeds which differ from each other far more radically than some of them do from the scientific creed. Is God a person or the one eternal substance? What do you mean by God? What are his relations to man? Is Free-will inconsistent with the belief in a God or a necessary consequence of that belief? Was Spinoza's creed a form of atheism or the only logical development of theism? If I accept his opinions, I need look for little difficulty with men of science; but, on the other hand, I must abandon all those doctrines as to a personal God and so forth, which, according to some teachers, constitute the very essence of theology. To send me to theology is, therefore, not to refer me to a single impulse, giving clear and consistent results, but to a variety of conflicting impulses which contradict each other on the most vital points, and some of which fall in with scientific teaching upon the very points at which others contradict it. The rational theologian of any shade assails the superstitions of less rational theologians by the same arguments as the man of science; and I do not know by what right all so-called theology is regarded as forming a single group of beliefs radically distinguished from the scientific doctrine which abandons theology.

I do not say this in order to draw at this point the usual contrast between the harmony (real or imaginary) of scientific thinkers and the contradictions of their opponents. My point is at present to deny the validity of the assumption implied in Mr. Balfour's language. If science and theology formed two different creeds, resting on separate bases, accepting different canons of proof, and leading to conflicting conclusions, we might be puzzled to compare their relative validity. But the contention of the "freethinker" (to use Mr. Balfour's phraseology), is different. He would say, as I imagine, that there is only one system of belief, in which precisely the same principles and the same methods are open to all sides. Theology, according to him, is the name of a certain set of beliefs which have been reached by the same processes as the so-called scientific beliefs. It is derived from the guesses made by men in an early stage of in-

tellectual development, and which were not wrong in principle, though they naturally required correction. When a theory had to be framed as to certain phenomena, an anthropomorphic explanation was a natural hypothesis, which turned out to be in many cases incorrect. It was correct when used to explain the movements of a human body: incorrect when applied to the movements of a star. If this be a sound theory, it is natural that theology should gradually melt into science, as we actually find that it does. The gradual abandonment of the erroneous hypothesis, its slow naturalisation or adaptation to scientific teaching by means too familiar for illustration, has for a natural consequence that we are often unable to tell whether in some systems God means anything more than nature or the universe. If the evolution of thought be effected by the slow extenuation of the erroneous assumption, but is always due to essentially identical intellectual operations, the melting of one system into the other is perfectly intelligible. If we assume Mr. Balfour's position of two co-equal and independent powers, there would surely be a broader line of distinction.

The point is one I must try to emphasise. I believe in the unity of knowledge; I do not hold that there are two systems of truths, one scientific and one theological, which can exist side by side in partial independence. If it were so, indeed it would be difficult to understand how they could ever come into collision. The theologian might reign in one sphere and the man of science in the other, and to reconcile them would be simply to point out the distinction of their several spheres. But Mr. Balfour admits what is, of course, obvious, that the two systems contradict each other on some points, even though he tries to extenuate their number and importance. It is therefore important to discover, if possible, what is the nature of the distinction; for our judgment upon his mode of reconciliation must necessarily be affected by our mode of conceiving their mutual relations.

Mr. Balfour divides all our knowledge into four heads—science, metaphysics, ethics, and philosophy. Philosophy, in his sense, is a systematic account of our grounds of belief in any department of knowledge. Science includes the knowledge of all history and matters of fact, or of "phenomena and the relations subsisting between phenomena". In his last chapter he generally uses it in a much narrower and more common sense; but we may admit that all knowledge of phenomena belongs to one and the same class, whether we apply the name science to the whole class, or only to the small part of it, which has been definitely organised into recognised sciences. And, finally, metaphysics includes doctrines of the absolute and the knowledge, real or supposed, of all entities not phenomenal. Where is theology to be classed?

Mr. Balfour puts it under metaphysics ; and, of course, theology in the narrowest sense of the word, deals with theories of the absolute and with entities not phenomenal. But it is necessary to add that theology has also a scientific element. Every theological system includes at least a large mass of purely scientific statements, if we understand science in Mr. Balfour's wide sense. Christianity, of course, implies a belief in certain historical facts. It includes statements as to the relations between phenomena. Prayer produces rain—or may produce rain—is as much a scientific statement as the statement that rain is produced by atmospheric currents. Every doctrine about grace, the efficacy of the Sacraments, and so forth, includes psychological theories, true or false, though it may include much more. Could theology be divorced from all relation to "phenomenal" facts, I do not think that men of science, or, indeed, any but a few curious metaphysicians, would trouble their heads about it. Its surpassing interest is primarily due to the fact that it has an important bearing upon facts ; in other words, that it forms a part of science, or, in the old phrase, that it is the very Queen of the Sciences, the body of first principles upon which all other truths depend.

So far, then, the distinction seems to me illusory. Theological facts belong to the same order as other facts, and must be proved by evidence of the same kind. It is true that pure theology (if one may use the phrase) is part of metaphysics ; but this does not justify Mr. Balfour's distinction. All knowledge implies a metaphysical doctrine, and that is equally true, whether our metaphysical theory admits or excludes the existence of transcendental entities. If I have any knowledge of such entities, I assume it as much in saying that the earth goes round the sun, as in saying that the earth was created 6000 years ago. Thus Mr. Balfour attacks very forcibly the proofs offered by the empirical school for the so-called "Uniformity of Nature". He does not consider it to be proved, or perhaps to be capable of proof, that all events are caused. His scepticism, if established, would have the same bearing upon theology as upon science. If an uncaused event be possible, there can be no ground for believing in a first cause. The theory makes room for the doctrine that all things come from chance. If a plant may have come into existence by chance, it need not have been created. The theologian and the man of science, in short, make precisely the same assumption and use the same logic, though they argue in different directions and at last arrive at different conclusions.

Mr. Balfour, indeed, seems to escape from this conclusion by his distinction between philosophy and metaphysics. His view seems to be (if I rightly understand him), that philosophy explains

the ultimate grounds of belief common to both classes : whilst the man of science uses them to establish theories about phenomena ; and the metaphysician (or theologian) uses them to establish theories about his transcendental entities. Now, I cannot draw any such line between philosophy and metaphysics. To me they seem to be merely different aspects of the very same process. A theory about such entities gives at the same time a theory of ultimate grounds of belief ; and conversely a theory of the ultimate grounds of belief implies a theory as to the entities—knowable or unknowable. A great part, for example, of Mr. Balfour's philosophic doubt applies to various forms of idealism. If Berkeley's idealism be untenable and contradictory, so is the conception of God which is implied in his theory of perception and causation. When Hume attacked the doctrine of causation accepted by Berkeley, he, at the same time, and by the very same argument, exploded (so far as his attack was successful) the theology bound up with it. With Berkeley God is the causal nexus, which is dissolved by Hume's scepticism. The entities in question, God and the soul and matter, are not objects of which we have independent knowledge, but are names for the conceptions involved in our theory of knowledge—that is, our metaphysics and philosophy coincide.

Mr. Balfour, then, is really attacking the foundations of all knowledge ; but I deny that the attack bears equally upon all knowledge. In fact, he must either adopt the suicidal scepticism, which makes knowledge as knowledge impossible, or he must admit that, by means of a " healthy instinct " or otherwise, we can get across this gulf of contradictions. He would, I think, agree that we arrive somehow—though perhaps by a process not strictly logical—at certain tenable beliefs about phenomena. The proposition (let us say) that the earth goes round the sun in a year, remains true, and probably has exactly the same meaning for the Hegelian, the Kantian, and the follower of Hume. They have, it is true, different theories of space and time and matter, but each would accept the same formula, subject to his own interpretation. This is, in fact, the reason or one reason for regarding the sceptical attitude as provisional. We do, in fact, get across the metaphysical gulf, though we cannot define accurately the process by which we have accomplished the feat.

Now (upon my hypothesis) theology and science are in the same position, so far as the preliminary difficulty is concerned. They both make certain assumptions about metaphysics or philosophy, and those assumptions involve precisely the same problems. Till we emerge into the daylight of phenomena, there is no differentiation of the two. The only difference is

this. The man of science, admitting the presence of certain hitherto unsolvable difficulties, does not pronounce upon them. He says, my statement is valid, whatever theory of space and time ultimately commends itself to metaphysicians. The theologian, on the contrary, often insists (for some theologians here, as elsewhere, agree with the ordinary man of science) upon making dogmatic statements in regard to these disputed points. He is not the less dogmatic though he is still in the twilight of absolute uncertainty. He insists upon our believing in the soul, though we cannot settle the theory about the relation of object and subject, which alone gives any real meaning to the word. But now both the scientific man and the theologian emerge into the daylight. They both make statements about facts, or, if you please, about phenomenal facts. So far they are both on precisely the same plane. They have made the same assumptions, have crossed the same gulf, and are discussing the same question. Antecedently to observation, a theory that prayer causes rain is a scientific theory as much as a theory that prayer to a human ruler causes him to act in a given way. But I now proceed to inquire which theory is right. If I can so far surmount scepticism as to admit of any reasoning about facts (and I must do so if I am not to be suicidally sceptical), my reasoning may show the theory to be justified in one case and not justified in the other. Theology is the name of a large number of theories developed from certain opinions as to the explanation of these facts, and Science for other theories developed from a different set of opinions. I may now, therefore, proceed to use the common-sense argument from the coherence and continuity of science, using the phrase in its narrower sense. I find, in fact, that our beliefs as to facts divide themselves into two classes, not in respect of primitive assumptions or methods of reasoning, but inasmuch as part of our theory has proceeded from a mistaken application of certain principles, and part of it from a right application. Either theology or science is simply a right theory applied in the wrong place, and to reason is simply to decide which is the right and which is the wrong application. If, then, I find (as Mr. Balfour agrees) a large body of theories, mutually consistent, constantly verified by independent observers, carrying conviction to all qualified inquirers, and gradually growing and extending without ever contradicting itself; whilst, on the other side, is a large body of mutually contradictory theories, never verified, always treating the same insoluble controversies, and slowly expiring as knowledge expands, I consider that I am justified in assuming the truth of the first set of theories, called collectively science, though now in a narrower sense. By science, in fact, I mean simply that body of truths, whatever it may be, which has been thoroughly tested and

established. There is no difference, except as to the degree of evidence, in the most transitory empirical observation of a given fact, and the most established of those general facts which we call scientific laws. If any body of truth has, in fact, been established, a theory which conflicts with it, and which rests on no such evidence, must at least be provisionally rejected. Whether any theory is really part of science or mere guess, is, of course, a question of facts, often very hard to decide. But believing that some truths have been sufficiently proved, I reject all that conflicts with them in virtue of that very belief; for I need not say that to believe anything is the same as disbelieving its contradictory. That is all the dogmatism to which I can plead guilty. I believe that a railway bridge breaks down when certain forces are brought into action, and that it will break down equally whether they act upon Sunday or Monday. If you call the opposite belief theological, I so far reject theology; but, in my view, it is simply a bit of exploded theory about facts—that is, of false science. The method of reasoning and the principles assumed would be quite accurate if they were applied to a different case. If I were about to cross a drawbridge kept by a fanatical Puritan, who disliked my crossing it on a Sunday, I should argue like the theologian and be very shy of trusting myself upon it, lest he should draw the bolts. But I see no reason for believing that there is an invisible and very powerful Puritan, who will behave in the same way when I cross, say, the bridge at Charing Cross, and therefore I cross it at my ease.

There is, indeed, one point which I must very briefly notice. Mr. Balfour argues in one chapter that the philosophical or metaphysical doctrines of the empirical school, especially the Berkeleyan idealism of Mill, make absolute nonsense of the scientific conclusions. Now, though I admire the ingenuity of his argument, I cannot share Mr. Balfour's own conviction of its conclusiveness. I cannot take the space necessary to argue the point fully. I admit, indeed, that there is a great difficulty in the theory. If we adopt the idealist position, there is a difficulty in saying what is meant by saying that the world, for example, existed before any conscious being perceived its existence. It is just the same difficulty as in saying that there is a shilling in my pocket, when I neither see nor feel it. I cannot answer any such difficulty completely, because I am not prepared with any theory of perception. I am, like Mr. Balfour himself, in a sceptical state of mind on the whole subject, and must be content to wait for the coming philosopher. But I hold this to be one of those metaphysical difficulties which are not fatal to any further advance. I believe that I can attain to truths which

will remain, although their full significance is not yet unfolded. Mr. Balfour urges the absurdity of believing that the appearance of colour can be derived from uncoloured particles. I see no more difficulty in holding this than in holding that a condition of hearing is movement in particles which are not sonorous. It is true that I cannot imagine the particles; for, to imagine them, is to see them in one's mind's eye; and they are, by their nature, not objects of sight. But, then, I reply that neither are they for me objects of belief. I am unfeignedly shy of speaking upon a theory which I very imperfectly understand. So far, however, as I can follow the scientific argument, I should say that the whole theory about molecules comes simply to this. I discover a certain formula purely from observation of the behaviour of visible bodies. I then assume that the same formula may hold good of particles (whatever such particles may be), which it is radically impossible to perceive. So far, I make a mere guess. It is verified by the discovery that, if the analogy holds, certain other phenomena will happen, which are observable, and which I actually do observe. The whole process, then, does not involve any real knowledge of the unperceivable objects; about which, so far as they are unperceivable, I can say nothing. The only result is, that a certain mode of calculation gives true results in regard to what is perceived; and it is quite possible that the imaginary particles may correspond to no reality which I can ever reach by my senses. I believe nothing whatever about the molecules, except that, by assuming them, I can put together a formula which brings out verifiable results. They are mere  $x$ 's and  $y$ 's, which may be dropped out of account when the rule is once obtained. But I must be content with indicating an argument which I cannot here pursue.

The above will, perhaps, sufficiently suggest what would be the nature of my answer to a very ingenious retort from the theologian to the man of science, suggested by Mr. Balfour on p. 304. My answer would be briefly, that there are not two systems of belief, but only one; and that theology is simply the unverified and unverifiable part of the system. It is merely bad science. But to explain or justify an objection to theology, it would be necessary to go further and point out in what the illegitimacy of the method precisely consists. I can only touch briefly upon so wide a topic; but I may indicate, at least, a part of the case upon which I should rely.

Theology, then, under one aspect, is either a scientific or a pseudo-scientific theory. To avoid the equivocal word science, it is a theory about phenomenal facts (if, which I doubt, "phenomenal" adds anything to "fact"), though it is also something else. I turn, therefore, to the chapter in which Mr. Balfour assails

most directly the validity of our knowledge of facts ; for, in considering what is the nature of the evidence upon which we rely, I shall come to the ground upon which I deny the validity of the theological interpretation. Besides the difficulties about perception and theories of knowledge in general, he takes two points which I may notice : the insufficiency of the proof for the uniformity of nature ; and the insufficiency of the evidence which can be adduced (even if that uniformity be granted) for any "historical" facts, that is, I should say, for any facts whatever not immediately perceived. The controversy as to the uniformity of nature is one of those upon which my own mind is not so clear as I could wish, and in regard to which dogmatism is inadmissible. I will, however, say what is, I think, sufficient for the present purpose.

The vague popular senses noticed by Mr. Balfour need not be considered. No scientific reasoner means by professing belief in the doctrine of uniformity to deny the possibility of rare, or astonishing, or even miraculous events, if by miraculous we mean merely an event caused by the interference of some powerful and previously unknown agent. The real difficulty is to interpret the phrase so as to make it differ from the identical proposition, that the same causes must produce the same effects. On the theory of causation derived from Hume, that proposition is not identical ; for if the universe be (as Mr. Balfour puts it) comparable to a ballot-box, a vast mass of mutually independent atoms, and by cause and effect we mean merely the occurrence of the same balls in the same order, we cannot establish a necessary connexion, when we have already assumed necessary independence. But if this be an inadequate account of causation ; if cause and effect be related "as the convex and the concave sides of a curve," or the cause be only one factor in a given process, the statement merely comes to this, that the same process always admits of the same analysis.

It seems to me that in any case the formula is not so much a postulate, universal or otherwise, as a statement of the process which constitutes all reasoning about facts. The alternative is not assuming some other postulate, but ceasing to think about reality. I may, of course, think of things without thinking of them as caused ; but it is a familiar fallacy to confound this with thinking of them as uncaused. I may put together the most heterogeneous and fluctuating assemblage of images ; but to ask whether this ideal construction corresponds to any reality is to apply the so-called postulate. I am asking whether the assumption involves any contradiction with perceived or recognised facts ; if it does, the reality is impossible ; if it does not, it is possible.

If, in fact, the doctrine were a postulate in the ordinary sense, it would be possible to suggest a belief which might be entertained without involving a contradiction, and yet inconsistent with the truth of the postulate. But I do not see how this can be done, except by falling into the confusion just noticed. I can, for example, speak of a dead man coming to life again—a proposition which I will assume to be contrary to all experience. It is easy enough in one sense to imagine this event, even though it corresponds to nothing in the real world. I can picture to myself a dead body, and change the picture to that of a living body. But how is it to be shown that the imagined event is inconsistent with the supposed uniformity of nature? The occurrence of all known symptoms of death, followed by the occurrence of the symptoms of life, is not impossible. All that would be immediately present to my senses, that is, all that I imagine in a case of resurrection, might be actually produced by a change in some unknown conditions. If, indeed, I knew all the conditions of life, I might know the event to be impossible, because I might see that it would involve the presence of certain conditions which I know to be absent. Till I know all the conditions, I can only guess the event to be impossible, however nearly my guess may approach to certainty. It is plain, in any case, that I have not really suggested any event inconsistent with the "postulate" until I have suggested a contradictory event; and, in that case, I certainly cannot believe in it. For, as I cannot produce a contradictory image, it is superfluous to say that there can be nothing corresponding to "it," "it" being a nonentity. Thus, when it is suggested that a body may, for example, have different properties at the pole or in a fixed star, I have nothing to say to the contrary; but I cannot see how the belief is inconsistent with my postulate. The properties of bodies may depend upon their position in the universe; and, so far, they are different bodies.

So far, in short, as my judgment about reality is concerned, it seems to me that the "postulate" falls in with the elementary assumption of all reasoning. It is the assumption that  $A = A$ . The statement is not superfluous, because I may believe contradictory properties implicitly, though I cannot believe them explicitly and simultaneously. Good logic consists, to a great extent, in bringing these implicit contradictions to my consciousness. But I cannot make a single step of reasoning, except in virtue of this postulate. I assume it, in interpreting a present experience, as in making the simplest inference to the past or future. I classify a particular object as a stone. I assume, that is, that it has the properties of a stone. I infer that it will fall if unsupported. I may, of course, imagine a stone remaining

unsupported in the same place. That merely means that I can see a coloured form remaining unchanged ; or, in other words, that I can draw a picture of a stone without drawing the support —which nobody denies. But if I saw such a phenomenon, I should certainly infer either an invisible support or the existence of a new class of things, namely, weightless stones. But there is nothing in this to contradict the postulate. If I could think of the stone as having weight and not falling, there would indeed, be a contradiction ; and, therefore, I cannot believe it. If I omit any of the predicates, I am referring the phenomenon to a new class. If I retain them all, I have implicitly applied the postulate.

But this view (which I will not attempt to expand) is fully consistent with an admission of an inherent uncertainty in all statements about facts. It has absolute truth subjectively not objectively, in reference to my ideal constructions not to the world without. My reasoning may fail because I am wrong in my identifications ; because I may always have omitted some relevant condition ; I am only certain that this (so-called) stone will fall, if it be a stone. It may be something else ; I may be under a hallucination. The fact that it is identical to my senses cannot demonstrate its identity in all relations, or the non-existence of an unrecognised force. If I argue as to the behaviour of a balanced needle without any knowledge of magnetism, I shall be liable to the grossest error, by identifying the magnetic needle with other needles identical to my senses. It is possible that the sun may not rise to-morrow. Somebody has maintained, I think, that the material universe is part of a gigantic brain. I cannot prove the contrary, and if there is a brain, there may be a body, and the arm may choose to scratch the head. In that case, nobody can say what would happen to the sun.

I conceive that the process of reasoning as to facts must always be conducted with reference to such principles. I observe, let us suppose, a single coincidence : a black crow or a heavy stone. Nothing, it is urged, can be inferred from such an experience. If I have seen a million black crows or a million heavy stones, I am still not entitled to conclude to a universal proposition, to say that all crows must be black or all stones heavy. That is perfectly true ; but it is also true that a single event always demonstrates a possibility. It proves that a black crow or heavy stone is a conceivable phenomenon, for I have conceived it. It even proves further that, for anything I can say, blackness and weight may be essential properties of crows and stones. Every fact, then, is a particular case of various possible laws, for the fact is related to the law as the stationary point to the continuous curve. When a new fact occurs, it falls

in with some of these laws, and shows others to be possible. Though such a process, however far it is continued, can never reach a certainty, it may amply justify a postulate; that is, a belief assumed for purposes of action. Such postulates tend, indeed, to pass into confident beliefs, and often much more rapidly than logic would justify. But considered as determining conduct, such a postulate may be as good as the most demonstrable truth. If, in fact, I am forced to go to the right or the left, and the direction which I take depends upon my believing or not believing a certain proposition, then the slightest presumption in its favour may be as good as a demonstration. If all the arguments derivable from my knowledge of the facts suggest that an enemy is in the path to the left, then I shall go to the right, as much as if I knew absolutely that he was on the left. So if any new phenomenon is sensibly identical with one previously observed, I shall act as if the identity were demonstrated. It is, of course, true that the doubt, which does not alter my decision, will still be allowed for. I shall feel a more or less confident anticipation, though I shall go in the same direction, according to the number, independence, and so forth of the various indications which have guided me in my identification of this with previous cases.

Now, extend this to the most general case. In any particular case, such as that suggested, I suppose that my sphere of action is in some way limited. I am determined to advance, though not determined upon the direction of my advance. The knowledge upon which that last decision rests is only a part of my knowledge—an inference resting on a particular belief, and guided by certain assumed rules. But when we speak of action in general and belief in general, these limitations disappear. I must always act in some way, if it is only to sit still and starve. And I can only extend my beliefs by extending in some direction or other the framework of actually existing belief. The process by which I do this may, of course, be utterly illogical and absurd. A particular belief may drop out of my mind or intrude itself into it in virtue of some mental process which has nothing to do with inference. But in whatever modes it is performed, I must always go through the process of grafting the new opinion into the old, that is, of fitting the new fact into the mental world; and when I ask whether the imagined fact corresponds to the reality this can only be done by applying the postulate. I do not obtain certainty by such means, but I obtain all the certainty possible. I have exhausted all my means of obtaining certainty. In this case, therefore, I distinguish between the belief so reached and an absolute belief, only in the sense that I keep my mind ready to accept a new theory in case

anything should arise to suggest it. But for other purposes the hypothesis is as good as proof.

Thus, for example, I have said that the sun may possibly not rise to-morrow. But as everything which I know, and every inference which I can draw from admitted facts, is consistent with its rising to-morrow, the doubt remains practically inoperative. If some new phenomenon should arise in the heavens tending to suggest an upset in the solar system, such an event would of course change my anticipation. Nor can any one say that such an event will not arise, and therefore my assumption that it will not arise implies no absolute knowledge. But it would be obviously unreasonable to convert this defect of knowledge into a positive reason for doubting; to say, according to the common and most misleading phrase, that there is a "chance" of the sun not rising, and then to convert this chance into a positive cause, like a new phenomenon in the sky. According to some arguments which I have seen, it would be right to say that, as we knew nothing for or against such an occurrence, the chances of its actually occurring are "equal". It is as likely as not that the sun will be smashed to-morrow, and therefore I ought to act upon that doubt, and only make a bet about breakfast. The fallacy would obviously depend upon our tendency to personify "Chance," and so identify ignorance with knowledge.

Without dwelling longer upon a point which I admit to be far from clear, I will proceed to show how, in my opinion, this bears upon one of Mr. Balfour's most ingenious chapters, that upon "Historical Evidence". He says (I epitomise his argument in the simplest way) that all inferences as to past history must involve a knowledge of certain facts and "laws," and of the principle of causation. The problem is how, from such premisses, to deduce the "ordinary version of history" (or rather, I suppose, a trustworthy version of history). We have always, he proceeds, to reason from effects to causes; and here is one source of doubt, since effects may, conceivably at least, be due to different causes. Hence, as he observes, the fact is always intrinsically doubtful; for though we may say, *e.g.*, that a man must die if his head is cut off, we cannot reason backwards and say that his head must have been cut off because he is dead. Even omitting this argument, there is still an immense variety of sceptical doubts. We argue, for example, that flint implements must have been made by men. Other causes are possible, indeed, but the chances are indefinitely in favour of human agency, if only we assume a certain condition of society in the past. But this is again a historical statement, involving new and doubtful inferences from effect to cause, and it is impossible to suggest any mode of estimating the various possibilities. So,

again, if an event is proved by a written document solely, it is always possible that the document may have been forged. How, then, can we settle the chances of forgery, without assuming various propositions as to the state of society or human character at a given period? Therefore, urges Mr. Balfour, "the chances against any particular version of history being true are simply as the number of possible versions of it is to *one*" (p. 56). He adds that it is always equally likely that a given event may be due to the First Cause as to any secondary cause; for, as he argues, it is "clearly impossible to show" that if It produced one set of phenomena directly, It may not have produced another (p. 57). That is, if I understand Mr. Balfour rightly, it is as likely as not that "It" may have written this article. In summing up his argument, Mr. Balfour repeats the same doctrine. We are "driven," he thinks, to the conclusion that if two or more explanations of "the universe are barely possible, they must for anything we can say to the contrary, be equally probable" (p. 283).

Here I will pause for a moment. It must occur to everybody that such an argument would be an awkward substratum for a defender of revealed religion. If accepted, it proves beyond doubt that it is as likely as not that the gospels were forged, for no one can demonstrate an impossibility in that hypothesis. As, moreover, the argument does not throw a doubt (as I understand it) upon our immediate beliefs, it does not amount to a necessarily suicidal scepticism. I may still be justified in believing in the existence of Mr. Balfour, for I may have the pleasure of seeing him, but the chances for or against the existence of some one who lived 2000 years ago must always be equal. However, we must follow truth wherever it leads us, even through apparent paradoxes.

Now, in the first place, let me state one or two considerations which Mr. Balfour would perhaps accept, but which strike me as tending to obviate some of his possible objections. The actual process by which we arrive at most or nearly all our opinions about facts is certainly not one of strict logic. We do not first prove that men have such and such characters at present, that their testimony therefore deserves so much weight; that past ages were in such and such respects different from our own; and then that such and such a given piece of evidence has such and such a value. On the contrary, we imbibe a vast mass of more or less distinct and coherent beliefs from our neighbours; we often attribute to such beliefs a weight altogether disproportionate to the logical evidence; and probably the immense majority of our ordinary assumptions are thus acquired, even if we are far above the average of mankind in reasoning power. All this is a commonplace. And if we desire to confine our beliefs to reason

as much as possible, we are aiming at an ideal which can never be actually attained. The ablest philosopher would probably find upon investigation that a very large mass of opinions, upon which he would unhesitatingly act, are in this sense mere prejudices. All that we can do is to prevent ourselves, as much as possible, from being consciously biassed by anything but reasonable argument, to test what beliefs we can, and to remember that other beliefs should be regarded rather as practical postulates than with confident assurance. So, again, many beliefs which we hold unhesitatingly are clearly not proved to the individual. A boy believes in the existence of Julius Caesar on the same grounds as he believes in the existence of Jack the Giant-killer. A thorough scholar believes because he has thoroughly examined the evidence; an ordinary man believes chiefly because he knows that the scholar believes. And when we say that the existence of Julius Caesar is proved, we really mean to express our private belief that there is evidence to be had which has convinced competent inquirers and would convince us. That such beliefs are often quite erroneous needs no proof. Two or three centuries ago people believed in Romulus quite as confidently as in Cæsar. And, so far, I think that such arguments as Mr. Balfour's may be very useful in calling attention to the probable insufficiency of much evidence, the necessity of a closer scrutiny, and the desirability of distinguishing more clearly in our own minds between proofs and guesses. I will only add that, in fact, such beliefs are often not so strong as we suppose. Personally, I am content to believe in Julius Caesar, but I do not at present see any case in which that belief is likely at all to influence my conduct. I am therefore content to take him for granted, till some scholar disputes his reality, and to leave him, as it were, in a lumber room till I have to bring him out for practical use. If I ever have to establish his existence by my own investigations, I shall very probably receive the same kind of shock as came to Tommy Tulliver and to many another school-boy on first realising the existence of a Latin-talking people. Beliefs of this sort really correspond more accurately than we notice to the deficiency of the evidence actually examined by the individual.

Having said this much, I come now to Mr. Balfour's case. The description which I have recalled of the ordinary process of belief suggests that it is a larger illustration of the simple process. We first accept a whole history—a complex series of beliefs—and see how it will work. We excise bits and add other bits. At every step we make assumptions, which are again verified or modified when we bring other facts into account. We assume testimony to have a certain validity, and men to have

certain characters, more or less, like our own. Each assumption has to be modified in turns, till we find one or other set of assumptions which will bring all the evidence into coherence both with itself and with that core of immediate knowledge round which all other knowledge has of necessity crystallised. Coherence, though not a sufficient condition of accuracy, is a necessary and a very prominent one; and if it includes consistence with our direct knowledge, it is sufficient to establish at least a practical postulate. If all that I know is perfectly consistent with a belief in Julius Cæsar, and if I can suggest no hypothesis, resting upon facts, which is inconsistent with the belief, then I shall act upon the assumption of his existence, and am entitled to come very near an absolute conviction of its reality. Undoubtedly, the process is very cumbrous and tentative; what are postulates in one argument appear as accepted truths in another and conversely; and this difficulty is the cause of the many errors which have prevailed for many ages in such cases. It has taken not one but many generations to unravel the puzzle, and they are still at it.

But here comes the difficulty. I have assumed just now that no hypothesis inconsistent with a given theory can be suggested. Till that is so, we cannot reach even a practical certainty. Is such a case ever possible? To suppose that Julius Cæsar was altogether a fiction (as undoubtedly he has been the centre of many false theories), we have to make a large number of assumptions which are generally regarded as absurd. We have to suppose the forgery not of one but of numerous accounts by independent people; to account for the construction of innumerable stone monuments and coins in many parts of the world; for the origin of many words, customs, and so forth; and last, but not least, for the entire disappearance of the true history for which that of Cæsar has been substituted. Of course, Mr. Balfour and I, as well as all moderately educated people, will reject this assumption; and on the ground which he mentions in the case of flint implements. The "chances," as he says, are infinitely against it. But what right have we to neglect the chance? If any theory be barely possible, he says, all are equally possible. The "chances" against the theory are as the number of possible solutions to one. And I do not see why we should not go further. It is possible, verbally at least, to suggest any number of theories compatible with the non-existence of Julius Cæsar—the forgery of many accounts, a popular hallucination, a modification of the solar myth, the intervention of "It," or perhaps of an invisible, malevolent being who delights in deluding mankind. All these hypotheses are "possible," that is, not self-contradictory. Why am I to reject any, or by what conceivable calculus estimate their relative importance?

Here I must say that the fallacy of the argument (so far as it is fallacious) appears to me to rest upon the misuse—to which I have already referred—of the word *Chance*. When a mathematician tells us that the chances of a certain event are equal, he may mean one of two things which are radically different. Either he means simply that we know nothing whatever about it—in which case we are not entitled to make any inference whatever about it. Or we know, as in the familiar illustration of heads and tails, a great deal about it. We do not know in the least whether in a given case head or tail will be uppermost. We do know as a matter of experience that, in the long run, they will occur equally often. I say that this is a matter of experience, and I am aware that the statement may be disputed. Still I am quite unable to see how we can by any other hypothesis avoid the absurdity of extracting knowledge from ignorance. If, to recall a previous case, an ignorant man sees a perfectly symmetrical needle balanced on a point, is he justified in arguing that it will direct itself equally often to every point of the compass? If he is, his logic will lead him to a false conclusion. But how can we be certain, prior to experience, that some similar law does not obtain in the case of pence—that the relation of a penny to the earth is not affected in some way by the form of its surface? We guess that it is not so, because we know of no analogy which suggests such a relation, and on experience we find our conjecture verified. But in this case we are starting from an assumption (rightly or wrongly made) that the relation is not affected, and we are really arguing from knowledge, not from blank ignorance.

Thus, again, when Mr. Balfour lays down his theorem about the probability of a given version of history, he says simply this: that we can imagine, say, 20 different cases, each of which would produce the given result. Therefore he says it is 19 to 1 against each particular case. If he has actually summed up all our knowledge in regard to the event, I could agree with him in a sense. But the sense would make the proposition a mere repetition of the former statement. By saying that the chances were 19 to 1, I merely say that I can frame 19 other hypotheses; but I am not a single step further advanced unless I can say, in some sense different from a mere confession of ignorance, that the 20 hypotheses are all entitled to equal weight. Every mathematician—even if his mathematics be of so rudimentary a character as my own—is aware of the difficulty of so counting the various cases as to be sure that they are independent, and entitled to an equal weight in the subsequent calculation. If I know that certain events will, in the long run, happen equally often, I may speak of the equality of the claims represented. If

I know nothing whatever about them except that I can verbally distinguish them, I have no right to a juggle which would convert blank ignorance into a basis of calculations. In all cases, as I believe, where a valid inference is made, we really know something more of the facts than the bare incapacity to see a difference; we have some positive reason for thinking that there is no difference.

If, indeed, we could admit Mr. Balfour's mode of argument without some tacit qualification, we come at once to an absurdity. The bare fact that a thing is not absolutely certain proves that it is indefinitely improbable. There is a margin, if I may say so, of absolute ignorance in any case where there is not perfect knowledge. The very fact that I know nothing about this margin, proves that I may cut it up verbally into any number of divisions; and, as each of them is to count for one and, because we know nothing about it, to count for as much as the known case of possibility, the "chances" against that case may be multiplied as much as we please. This would certainly be a short cut to scepticism; but I deny that there is any real meaning in the words.

In fact, I quite agree that when I have to consider any past or future event, or, indeed, to explain any present event, there is always a difference between my knowledge and absolute certainty. The conviction may approach such certainty as the curve approaches the asymptote, but there is always some room for doubt. I explain by trying to suggest some possible formula under which the event may come, and then to find some basis in the assumed facts to which the formula may become operative. I do so, for example, when, in Mr. Balfour's illustration, I suppose a document to have been forged. Forgery represents a known mode of producing documents, and when a given document is in question, I may always try how this hypothesis will fit the facts. But suppose that I make a hypothesis which has absolutely no relation to the facts already believed, which stands altogether outside of all known series of events, I am merely allowing my imagination to play in a pure vacuum, and simply repeating over again the old admission that there is some uncertainty. I may parcel that uncertainty out into one or fifty different forms, but it can make no difference to the argument.

Further, as soon as I have suggested what I should call a real explanation, a legitimate inference from some facts, I can then estimate the chances—not, of course, that I can find a numerical estimate, except in the very rarest cases, but still a vague estimate, which is after all often quite sufficient, because the chances in favour of one solution may be (as Mr. Balfour says in the case of the flint implements) indefinitely great. So, for example, I

find a printed book. It is rigorously possible that the book may have been made by a man drawing letters out of a bag at random ; but I do not suppose that any one would entertain such a suspicion in the case of a coherently intelligible work, and the reason is simply that the chances are indefinitely in favour of the obvious hypothesis that the book was written. By saying that the chances are in its favour, I here point to a wide knowledge of the way in which phenomena are actually produced in this world. I can therefore start from a base of positive knowledge ; and the same principle, which I will not try to work out in detail, is exemplified in the case of Julius Cesar. The hypothesis of a number of forgers existing in different ages and the many other subsidiary hypotheses are so improbable, that is to say, they assume a state of things to which my experience tells me there can be so rarely any faint approximation, that I reject it unhesitatingly. I may not have expressed myself accurately, and I am well aware of the great difficulty of accuracy in such questions ; but unless I am substantially right I do not see how we can escape from a suicidal scepticism as to all facts whatever, or get beyond our own immediate sensations.

Mr. Balfour sums up his argument at this point by saying that there are four different suppositions ; we may have to decide as to a historical statement, (1) between different sets of phenomena whose laws are known, (2) between "noumenal" and phenomenal causes, (3) between phenomenal causes with known laws and phenomenal causes whose laws are unknown, and (4) and finally, between causes known to have existed and others which (for anything we know to the contrary) may have existed. And here, I must first remark, that the distinction between the noumenal and phenomenal, whatever its value, seems to be entirely irrelevant. I cannot understand that any philosopher who believes in the "noumenal" can ever regard it as a conceivable alternative that an event may arise from noumenal or phenomenal causes. The "noumenal" is that which underlies all phenomena—not something which exists alongside of them. If I say that a document is either forged or genuine, I in each case assume a noumenal cause equally if I ever assume it. It is the unknowable something—unknowable in itself, at any rate—which binds phenomena together, the substance in which all accidents inhere, not an alternative thing which may sometimes take a part as itself phenomenal. If, indeed, we say that a document is produced by a noumenal cause, and another document by a phenomenal, the noumenal becomes phenomenal. And this suggests the real meaning of Mr. Balfour's remark about the First Cause. It is to my mind a clear proof that the explanation, as applied to particular facts, is merely verbal. I

may stop at any point in tracing out a series of events, and, as Mr. Balfour points out, at one point as well as another. If I then assume that things actually started at the point thus selected, I "explain" their beginning by calling it a creation. But the explanation is purely verbal. I first assume a stoppage which is perfectly inconceivable, and in contradiction to the universal postulate. Then, as I must get over the contradiction, I explain the inconceivable event by an inconceivable process. Creation is really nothing but a name for leaving off thinking, and giving to cessation of thought a positive name. It may be illegitimate to talk about the noumenal at all; but at any rate I must not afterwards proceed to treat it as if it were phenomenal, either by introducing it as a single factor in the world, or by making it represent one part of the process in time, and calling the succeeding part phenomenal. To say that a thing is due either to a phenomenal or a noumenal cause, is saying that an explosion is due either to a spark or to a causality. I should propose, therefore, to omit the word altogether from Mr. Balfour's argument, and to cancel the case in which it occurs. And, further, if by the unknown causes in his last case he means causes altogether beyond our sphere, of whose action we have no warrant and no suggestion whatever in existing facts, they represent, I should say, merely that margin of inevitable uncertainty which has no bearing whatever upon our postulate, and only imply the duty of admitting new suggestions whenever they may come within our vision. The other two cases, as I understand them, are often valid. We may be in doubt whether a document is forged or not, and any hitherto unexplained fact may be of such a nature as to suggest the insufficiency of existing formulae. So long as either case is possible, we should suspend our opinions more or less, and it is the great duty of inquirers to be on the look out for such facts. But, further, there is always in these cases some real means of estimating chances more or less roughly. If any case is completely covered by two alternative formulae, both based on some known state of facts, we must remain more or less in suspense; but we can at least appeal as a general rule to a kind of inarticulate logical instinct, which roughly evaluates the ease with which either explanation will fit into the existing framework. To show by what means this may be done, and what degree of accuracy the process admits, would be to write a treatise upon inductive logic.

And now I can, finally, return to the comparison between the claims of science and theology. The difficulty turns partly upon the fact that theologians habitually use the word God in two radically different senses, that they confuse the noumenal and

phenomenal, and identify Jehovah with the Absolute and the "Stream of Tendency". Now, in regard to theology, in the more primitive sense, in that which it bears with savages, with children, and with the ignorant part of civilised races, the theory that there are one or more invisible beings of great power who take a part in the production of phenomenal events,—my answer to Mr. Balfour would be that this is a theory which has been proved to be either inaccurate or superfluous. I do not say proved by "science," but proved by the general action of the intellect. It is proved—that is, as much as anything can be proved—that we never find intelligent action except where we find a brain, or at least a nervous system. I reject any doctrine inconsistent with this theory, simply because I can see no basis for it in facts or in any of those general statements of facts which we call laws. Whether Catholic saints, or Pagan gods, or mere savage fetiches, or the "spirits" of mediums are assumed to exist, there is no proof of their existence; they "explain" nothing which cannot be better explained without; and, moreover, it is easy to account for the origin of the error. It is simply an application of a scientific method in the wrong place, a mistaken grouping of facts which have been proved to be different in character. I may, of course, be wrong in this opinion, but its grounds are as familiar to Mr. Balfour as to myself, and are equally valid upon any theory which admits of our obtaining knowledge of phenomena at all.

But the non-existence of such beings is not proved and cannot be proved. I fully grant it. Only the non-proof is in this case as good as positive disproof. Thus, for example, I suppose thunder to be due to the action of a god throwing bolts from the sky, or the planets to be moved by angels, which is a very natural guess in an early stage of inquiry. Now, this is to assert that the planets and thunder will exemplify the same rule as the projection of missiles and the guidance of chariots by human beings. A more accurate observation shows this to be a mistake; that thunder arises under certain electrical conditions, and the planets revolve regularly in ellipses. This certainly does not prove that there are no beings throwing thunderbolts at the right moment or moving the planets. But it proves that, if there are such beings, their existence is absolutely irrelevant to me. My previsions will not be affected in one way or other by supposing them to be there. They are for all practical purposes, as if they were not. They are relegated to that region which Mr. Lewes called "metempirical," for, by the assumption, no test can possibly be devised for saying whether they do or do not exist. Their existence, that is, cannot be verified. It is then needless to take it into account.

Mr. Balfour says truly that the simplicity of a rule is not a sufficient ground for accepting it. This is true in the general statement, but there is a particular case in which it is amply sufficient. That is the case, in which two rules always give the same result, but one involves a complex process of self-correction so as to justify the other. I may say, for example, that a body always moves in a straight line, or I may say that it always moves upon the outline of some complicated curve, which again always revolves round a moving point in some equally complex fashion. I may (from a purely geometrical point of view) adopt either the Ptolemaic or the Copernican hypothesis, and always bring my planets back into the true path by a complex series of epicycles. And similarly I may say that the planets move in an ellipse, or that a spirit moves them but always keeps them in the same line as the simpler theory prescribes. Obviously, in this latter case, the spirit is a mere superfluity. I may make as many such hypotheses as I please, but they have no relation to any facts, and give a merely illusory appearance of knowledge. Either the spirit is a common quantity which may be left out of account on both sides of an equation, or he is a being of whom I falsely imagine myself to have some independent knowledge. In either case, we are better without him.

And this, as it seems to me, is the origin of the other form into which theology develops. You still retain your invisible being, but you decline to make any specific inference from his existence. He retains a nominal existence upon the strength of a tacit engagement not to interfere with any particular event. He is gradually rarefied into a transcendental or noumenal being, whose existence may be necessary to everything, but who exerts (if I may say so) no differential influence. He does not affect one series of events more than another. Whether we are bound to believe in such an entity, whether there may be some universal substance of the Spinozistic kind, is no doubt a very interesting as well as an exceedingly complex question. I only say that such a being cannot possibly interfere in any way with scientific laws, which deal with phenomena. It is a mere sophistry which first calls upon me to believe in this universal substance and then proceeds to infer some particular action on a given event or a given part of the universe. Such a belief is fully as much opposed to miracles, the efficacy of prayer, the infallibility of a church, and so forth, as the belief which would take the hypothesis to be superfluous. And therefore, though I do not deny the legitimacy of this doctrine, I think I am entitled, whether I accept or deny it, to reject any theory professedly founded upon it, and yet professing to justify belief in a particular invisible agent. The terms are shifted by a palpably

contradictory artifice. The more I believe in the God of Spinoza, the less I believe in the pomp of theories about "supernatural" interferences, which Mr. Balfour seems generally to understand by religion. Briefly, my argument is, that theology is either a scientific theory, in which case any mode of comparing between different scientific theories is equally applicable to deciding upon this theory, and, if there be no method, we are driven to "suicidal" scepticism—to the negation of belief as belief; or theology must escape by retiring altogether to the metempirical world, where it can have no relation to any scientific doctrine, that is, on Mr. Balfour's acceptation of the word—no relation to any particular facts.

LESLIE STEPHEN.

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## II.—PLEASURE OF VISUAL FORM.

It is often said that the pleasure of form as contrasted with that of colour is an intellectual pleasure arising from the perception of relations (unity in variety, proportion, &c.). In a sense this is true, for, as I hope to show in the course of this essay, the appreciation of form as compared with the enjoyment of colour is saturated, so to speak, with the more refined sort of intellectual activity. But the fact that one of the arts of form, namely, outline drawing, dispenses not only with the pleasure of colour, but also with that of light and shade, suggests that the pleasure of visual form includes a sensuous element as well as an intellectual. It will be my special aim in this paper to bring out this somewhat neglected factor in visual gratification, and to indicate, so far as it is possible, its importance among the several factors, which together compose what we call beauty of form.

In pursuing this inquiry, it will be best to disregard the sensuous enjoyment of light and shade. For our present purpose, differences of light and shade are merely means of appreciating form. Again, it will be advisable to include all varieties of form as determined by the three dimensions of space. It is true that beauty of form, so far as it rests on purely visual feelings, is largely that of surface-relations or of space in two dimensions. Yet it will be found to be practically impossible to treat of this apart from that other kind of beauty of form which embraces the charm of distance and perspective, and the characteristic attractiveness of solid shapes. As to the order of treatment, I

shall set out with the elements of pleasure which are obviously direct, that is, arise from the activity of the visual organ, and trace the process of building up a more complex intellectual gratification on these. After that I shall pass to the indirect or associated elements of enjoyment. The simplest kind of visual appreciation of form is that of linear relations. For reasons to be spoken of presently, a straight line is the natural element of visible form, and the development of the visual perception of form (regarded as independent of that of the tactual) proceeds by a kind of synthesis of linear elements. We may therefore confine ourselves for the present to this kind of form-intuition.

There are two ways of perceiving a line: either the eye may move along it, and appreciate its direction, length, &c., by the aid of movement; or it may fix the line, and estimate it by means of the impressions it simultaneously makes on different retinal elements. I shall assume here what is held by German writers like Lotze, Helmholtz, and Wundt, as well as by most English psychologists, that the former is the earlier method. This, then, is the simple experience into which we have first to look for the germ of the enjoyment of form.

#### SENSUOUS FACTOR.

We must imagine the eye, and first of all one eye apart from the other, moving as it now does, but having, instead of an extended retina, a single sensitive point at the centre of the yellow spot, which is successively directed to different points in the outline of an object, with no other change of feeling than that which is connected with the movement itself.<sup>1</sup> It is plain that this experience will exactly resemble that of following a moving object, as a shooting star, with the single difference that in the former case the rapidity of movement will be a matter of choice. In order to understand the kind of aesthetic experience which the eye would have under these circumstances, it is necessary to say a word or two about its mode of action. I shall suppose that the reader is acquainted with the general features of the mechanism of ocular movement, and content myself with specifying one or two facts having an important bearing on our subject.

First of all, then, I would remind the reader that setting out from the natural or "primary" position in which the axis or centre of vision is directed to a point immediately in front of it, the eye is able to follow any line in the supposedly flat field of vision without a great expenditure of muscular energy, and with

<sup>1</sup> This supposition is not really conceivable, since a plurality of retinal elements is necessary to the eye's following any line.

a uniform action of one or more muscles.<sup>1</sup> In other words, it is the simple and normal mode of visual action to describe a movement which answers to a straight line on the flat field. But though all rectilinear movements from this primary position are normal ones, some are easier than others. Thus, while horizontal movements only require the action of one muscle, vertical movements involve two, and oblique movements three.<sup>2</sup> Movements far away from the primary position to points near the periphery of the field clearly involve a greater degree of muscular expenditure, the muscles in this case being contracted to their extreme limit. Further, it is noteworthy that in these outer regions of the field, movements are no longer executed with the same simplicity. Thus, if the eye follows a horizontal line lying high in the plane of vision, more than one muscle is involved. To sum up: the eye, owing to the laws of its mechanism, follows a line much more easily in the central than in the peripheral parts of the field, and in the central parts it follows a vertical line more easily than an oblique, and a horizontal more easily than a vertical.

It would seem to follow from these conditions of facile movement in monocular vision, that in the case of binocular vision movements with parallel axes will be easier than movements with convergent axes. And this is proved by observation, for, as Wundt points out, infants instinctively move their eyes in the former way. Combined movements with convergent axes constantly involve an extra element of muscular tension, namely, that which is required to counteract the natural tendency to parallelism.<sup>3</sup> For the rest, it is to be noted that with respect to "movements of convergence" (which cause the axes to approach one another, or *vice versa*), the symmetrical movements, which would be executed in following a receding line in the medium plane of the body, have so far a natural superiority over asymmetrical ones, that in the former case the movements of the two eyes are exactly similar, in the latter case not so. The greater sense of ease which accompanies such symmetrical movements is probably explained, in part at least, by the constant need of executing such movements in passing the eyes from near to distant points lying in this medium plane.

<sup>1</sup> In this primary position the tension of the antagonist muscles is just balanced, and movement involves the first and easiest stages of contraction and relaxation.

<sup>2</sup> See Wundt, *Physiologische Psychologie*, pp. 536-539.

<sup>3</sup> It is to be added, however, that in the case of movements with convergent axes, directed to a point immediately in front of the two eyes, the contrast between horizontal and vertical movements pointed out in the case of monocular vision, seems to be somewhat modified, though hardly obliterated.

Let us now pass to the subjective aspects of ocular movement. Although there is still a good deal of uncertainty respecting the exact composition of the feelings of movement, it may be taken as fairly proved that they include an active element or "feeling of innervation," which is correlated with the central excitation of motor fibres, and a passive element or tactile sensation which is connected with a reflex excitation of sensory fibres, consequent on certain differences in the tensions and mutual pressure of various parts of the skin which result from the movement.<sup>1</sup> The recognition of this two-fold element in the feelings of movement may help us in understanding the pleasures of ocular movement.

It will, I think, be admitted as a truth, which is both borne out by direct experience and deducible from more general principles, that every movement of an organ is accompanied by at least a slightly pleasurable feeling, provided it has an appreciable duration and rapidity, and on the other hand is not excessive, whether as violently rapid, or as unduly prolonged in time, by repetition, or, finally, as unduly prolonged in space or carried beyond the limits of ordinary and easy muscular contraction. The movements of the eye will be found to illustrate this law, though, owing to the small calibre of the ocular muscles, both the enjoyment and the fatigue attending them are apt to seem insignificant quantities. The pleasures of ocular movement are thus confined within definite limits, namely, a certain duration of a certain velocity of movement over the central part of the field of vision. Further, movements involving a higher degree of muscular expenditure grow fatiguing sooner than others, as we may see in the case of following the outline of very near objects with convergent axes. Finally, certain combinations of muscular action give rise to fatigue sooner than others, *e.g.*, those necessary to oblique movement sooner than those involved in vertical or horizontal. The reason of this may be not so much the larger number of muscular factors as the relative infrequency of the combination. We have in a general way much more need to execute vertical and horizontal movements than oblique ones, height and lateral distance being the two most important dimensions; and this would tend to make the former easier and less rapidly fatiguing. For a like reason, the superior ease of horizontal movements may be referred in part to the greater need in general of attending to lateral relations of distance than to vertical ones.

Within these limits of pleasurable ocular movement we may

<sup>1</sup> It is probable that this passive element includes the mental concomitant of an excitation of the sensory fibres which are known to run to the muscles themselves.

find a difference in the quality of the enjoyment, according as the movement is energetic (though not excessively so) or comparatively restful. In the first case the feeling is of a more active and stimulating quality, and approaches in character the sense of power which we experience when we employ the larger muscles of the body. In the second case it is more passive and allied to sensation proper. It may be thrown out as a conjecture that the former mode of pleasurable feeling is connected with the excitation of the motor fibres, whereas the latter consists mainly of the tactful and other sensations already referred to. We may, perhaps, conceive that when the motor innervation reaches a certain degree of intensity, its mental correlative becomes the predominant feeling; but that when it falls below this point, the passive sensations come to the surface of consciousness, so to speak, and give the dominant character to the feeling. On the whole, the gentler forms of ocular movement yield richer enjoyment than the more energetic. The muscles of the eye hardly seem to be of a sufficient calibre to supply the full consciousness of active force, which is a concomitant of the energetic action of the larger muscles of the body. Hence it may be said that the quieter forms of motor enjoyment are preferred by the eye.

This difference in the quality of the agreeable feelings of ocular movement is best seen in comparing slow and rapid movements, as in following the progress of a rocket in its early and later stages. As Professor Bain remarks, rapid visible movements are stimulating, while slow ones are more voluptuous and allied to the richer varieties of passive sensation. In following straight lines, and in tracing the outlines of objects, the eye has, it is obvious, a choice out of an indefinite number of velocities of movement. It is probable, for the reason just given, that under these circumstances it usually prefers a slow to an excitingly rapid species of movement.<sup>1</sup>

For a similar reason those directions of ocular movement which answer to easy and habitual muscular action, have more of a pleasurable character than those which soon approach the threshold of fatigue. Thus, a horizontal line is, as a rule, in itself, and apart from any extraneous consideration, more enjoyable, because more restful, than a vertical. Let the reader compare the feelings he has in looking at architecture, in which the vertical direction predominates, and at the approximately horizontal lines of a flat landscape. A somewhat analogous difference exists between movements of the two eyes with strongly

<sup>1</sup> A certain rapidity is no doubt made natural by the need of visually construing objects as wholes.

converging and with parallel axes. The sweet repose of distance arises in part from this comparatively relaxed form of muscular activity.

So much as to the pleasure of single ocular movement. Let us now see how a pleasant succession of movements is to be secured. The conditions of agreeable sequence of movement seem to be the combination of the refreshing and stimulating element of change with an element of smoothness or ease of transition. Change of movement is, of course, necessitated by the universal condition of mental life, and variety is the very essence of all aesthetic feeling. On the other hand, a chain of varied movements may be smooth and agreeable, or jerky and harsh, and this difference is related to the innate mechanical conditions of movement, and to the effects of habit.

Change of movement may most easily be secured by a variation either of velocity or of direction.<sup>1</sup> One and the same movement may vary in velocity, as in watching the ascent or descent of a projectile thrown up vertically. So different movements may present a difference of velocity as in the sequences of a ballet. Such contrasts plainly answer to the most favourable mode of expending motor energy. Again, our movement may be followed by another of different direction; that is to say, one that involves the action of fresh muscular elements, or a change in the relative amounts of action of two or more combining muscles. All complicated movements of objects and all arrangements of lines in the figures of bodies supply such variation in abundance.

So much as to change of element. Let us now pass to the other condition of agreeable sequence, namely, smoothness. The first and most obvious way of realising such smoothness is by reducing the degree of change or contrast to a minimum. In this way we get a gradation of movement either in respect of velocity or of direction.

Gradation in direction or velocity, like gradation in shade of colour or pitch of tone, is attended by a peculiarly agreeable feeling. One and the same movement may exhibit a gradual rise and fall of velocity, and it is probable that this is the form of movement naturally produced by all muscular contraction. Gradation in direction, which is at the basis of all curvilinear movements, depends on a gradual alteration in the relative degrees of activity of two or more muscles, and so corresponds to gradation in colour or tone, which is supposed to rest on a continual increase of activity in certain nerve-elements, and de-

<sup>1</sup> Change of duration and extent of movement will be best spoken of later on.

crease in others. A mode of gradation somewhat similar to that in direction is experienced in symmetrical movements of convergence, and especially in moving the axes from a near to a distant point, and so gradually relaxing the tension due to convergence.<sup>1</sup>

This mode of motor enjoyment is realised when standing in the middle of a building or an avenue of trees, and tracing an imaginary central receding line; and it is noticeable that we naturally place ourselves in the position and execute this kind of movement whenever we wish to appreciate the effect of perspective. It may be added that a union of gradation of velocity with that of duration, as in tracing the path of a projectile across the field of vision, affords the eye its richest form of motor delight.

A graduated series of movements allows of the least exciting degree of the feeling of variety. If a more powerful effect of change is desired, the element of smoothness must be looked for in another way. A succession of different movements has a certain degree of smoothness if they are continuous and free from sudden pauses and jerkiness. This can only happen if the movement is continuous in time, and, what is implied in this, in space—that is to say, the second movement must be one which can be commenced in that position of the eye in which the first has left it. Where this is not the case, there must be a “spring” of the eye to the new starting-point, which counts as an appreciable element of roughness or unevenness.

A higher degree of fluency is attained when the muscles, successively employed, are organically connected one with another, whether by some innate arrangement or by the influence of habit. This applies more especially to the action of the antagonists. A movement of the eyes to the left of the field produces a tendency in the antagonists to pull them back again. Hence the natural disposition to trace a line forwards and backwards. Assuming the primary position to be the natural one, we may argue that any movement of the axis of vision from the centre of the field excites a tendency to a corresponding movement of return to the central point of repose. Any chain of visible movements, as those of a ballet, and any arrangement of lines will gratify the eye in proportion to the number of such balancing actions of the ocular muscles which it includes.

It is only one step more to say that a full degree of fluency of movement implies a simple rhythmic order in the successive movements. The muscles of the eye being symmetrically

<sup>1</sup> A rectilinear movement of the eye away from and back to the primary position, may be said to afford a faint feeling of gradation, analogous to that experienced in movements of convergence.

formed, it follows that the action of any one will be compensated by the action of another of the same duration (the velocity being supposed to be the same). In this way a certain amount of rhythmic or equal time-order is rendered agreeable by an innate organic arrangement, and quite independently of any conscious perception of time-relations.

And here we reach the limit of what can be called the organic factor of sensuous gratification in ocular movement, and trench on the properly intellectual enjoyment of perceived relations. The perception of proportion would no doubt be possible if the eyes were what we have so far imagined them to be, incapable of simultaneous impressions. The moving eye, like the moving limb, can appreciate relations of duration and distance or time-rhythm and space-rhythm within certain limits. Yet such a co-ordination of successive elements would be certainly inferior to that of the actual eye, with its capability of simultaneous impressions. It would probably be inferior to the ear's perception of measure. Hence we shall do best to treat of the visual sense of proportion and equality of magnitudes in connexion with that more complex organ with which nature has actually endowed us. To the consideration of this higher kind of perception let us now pass.

#### INTELLECTUAL FACTOR.

In endowing our imaginary eye with an extended retina which allows of simultaneous perception of form-relations, we do not get rid of the elementary experiences of movement first dwelt on: we only transform them somewhat. There is good reason to think that actual movement enters into our customary perception even of the smaller forms much more than is generally supposed. It may be added that what we call a simultaneous perception of form is often, as I shall have occasion to show presently, a sequence of simultaneous perceptions. But more than this, one may now contend, with a fair degree of confidence, that even in the perception of form by the resting eye, motor elements are essential ingredients, however much they may be disguised.

I need not here expound or defend the hypothesis of local signs put forth by Lotze, and accepted with certain modifications by Helmholtz and Wundt. Readers of MIND may be supposed to be sufficiently familiar with the theory, and the kind of proof of which it is susceptible. My concern here is to trace some of the aesthetic consequences of this hypothesis. It at once follows from this theory that the resting eye's perception of form consists of a mass of motor feeling ideally represented. In other

words, it is made up of a number of imperfectly distinguished imaginations of movement in different directions, &c. And these representative feelings are very various in character, since we are vaguely aware that any fixed line, for example, offers a choice of movement in two directions, and of an indefinite number of velocities. Now, if we conceive that the feelings of movement thus represented in a confused aggregate are distinctly pleasurable however faint, it must follow that such a condition, of what I may call the motor imagination, will be a highly agreeable one. It will involve a vague consciousness of a wealth of motor experience, and a large area of selection. It has been said that the possibilities of enjoyment in valuable possessions, as wealth and friends, often count more than the amount of actual enjoyment we are ever likely to get out of them. This remark may apply to that recognition of the possibilities of pleasurable movement which every beautiful form supplies to the resting eye.

The capability of simultaneous local recognition by the eye would seem in this way greatly to enrich its enjoyment of form. Our appreciation of a beautiful line includes a transition from a state of actual movement with its definite motor feelings to a state of actual repose with the imagination of movement only and of relatively indefinite feelings of movement.

To verify these deductions, it would be necessary to show that all agreeable forms up to the most beautiful do answer to pleasurable ocular movements. In a general way this will be found to be so. A beautiful figure is one which selects such elements of form, together with combinations of these, as supply the eye with the more agreeable varieties of motor experience already spoken of. The selection of curved lines, the preference for horizontal lines (which seems to be exemplified in the feeling for bilateral symmetry), the taste for continuous forms or contour arrangements, for the grouping of parts about a centre and for symmetrical balance (which answer no less to the natural conditions of easy movement than they do to the arrangements of the retina itself)—all this seems to show how closely beauty of form is conditioned by the laws of agreeable movement.

At the same time, what we call a beautiful form is sometimes ready to sacrifice this pleasure of movement; and it does so just because it can command another kind of gratification—namely, an intellectual pleasure in the recognition of relations. To this new factor we may now pass. I have already remarked that the moving eye, capable of successive experiences only, would not attain to any very complex perception of relations of parts. The capability shown in the delicate discrimination of shades of direction and distance, and still more in the co-ordination of

manifold details under some aspect of unity, seems to be inseparably bound up with the fact of simultaneous retinal impression. A word or two will perhaps make this clearer.

The substitution of simultaneous retinal perception of form for successive perception has the effect of bringing together the terms of the relations of variety and contrast, unity and similarity, under what is approximately one act of attention. If we watch the movements of a painter's hand as he draws the outline of a human figure on a canvas, our eye may attain a rough perception of the successive directions and distances; but how vague will this perception be as compared with that which we instantaneously obtain when the artist moves away from his canvas, and shows us these as parts of a permanent co-existent whole! In the former case we had to bring together by the aid of memory a number of impressions occupying some appreciable time: in the latter these were presented to us in one and the same instant. It must follow, then, that the perception of all relations, whether of dissimilarity or similarity, will under the circumstances become more definite and more exact.

Nor is this all the gain. The addition of simultaneous retinal appreciation introduces a new and finer standard in estimating the elements of form themselves. In the case of two lines, for example, which are nearly equal, or of two lines which are nearly parallel, the discrimination of magnitude and direction is finer when the lines are brought together and simultaneously perceived by help of the retinal impressions than when they are so situated that they (or their distances from one another) have to be successively estimated by the moving eye.<sup>1</sup> It may be thought that these more delicate estimates are of more importance in science than in art; yet even in the latter the less obtrusive charm of form, more particularly that of the human face, involves this finer retinal appreciation. It may be added that even when the former is too large to be easily taken in by the eye at rest, the retinal capability of simultaneous perception greatly assists in the clearer and more exact appreciation of relations. In estimating, for example, the symmetry of a column, of a pyramid or of a human figure, the eye need not pass over the whole of the contour. It is sufficient if it describe a path answering to the axis of the figure; for in this case the perfect equality of any two opposed parts will be estimated by

<sup>1</sup> This is not inconsistent with the supposition that the retinal estimation of direction and magnitude may in the last instance be traceable to feelings of movement. One may suppose that the retinal judgment represents the average and constant as opposed to the particular and variable motor experience.

retinal perception, and the whole intuition of form will then consist of a series of simultaneous perceptions.

Having thus determined what means of appreciating formal elements and relations are at the command of the eye, our next inquiry will naturally be—What modes of aesthetic intuition, in other words, what intellectual perceptions of pleasing and beautiful relations of form, are possible by help of these means? Fortunately, this side of the subject has been pretty fully investigated already, and I shall be able to pass it over with a very few words.

I here assume, what is agreed on by most writers that beauty of form, so far as it is independent of sensuous pleasure on the one hand and pleasures of association and suggestion on the other, is resolvable into the presence of a certain order among manifold details, which order is commonly spoken of as unity in variety.<sup>1</sup> With respect, first of all, to the way in which the element of variety and contrast presents itself in visible form, a word or two will suffice. Direction and magnitude of lines, degree of change of direction, whether appearing as an angle or as a curve, each offer a field for the perception of difference and contrast. And each figure formed by a single arrangement of lines, may, in its turn, become, either in its form or simply in its magnitude, an element of variety in a larger scheme. Gradation, in respect both of simple direction or change of direction, as in gradually expanding curves, and of magnitude of line and form, seems to play a prominent part in the arts of form. It is worth noting that these elements of variety may be *indefinitely* present to the mind, as in the perception of all relation of distance and direction between points which are not connected by lines. The appreciation of superficial and solid, as distinguished from linear, form clearly involves a countless number of such less definite elements of visual perception.

The study of the various modes of securing a pleasing unity in visual form is a little more intricate. Speaking roughly, one may say that there are three distinguishable moments or aspects in this unity—namely, continuity of parts one with another, their common correlation with some one dominant element, which

<sup>1</sup> Mr. Gurney, in his highly suggestive article on the "Relations of Reason to Beauty" (MIND XVI.) seems to dispute this when he says (p. 488) "unity under variety is a characteristic, or rather is the definition, of all form, not specially of beautiful form". There is, however, I suspect, no real contradiction between us. Mr. Gurney uses the term beauty in a narrower sense than I do. To me all form, as defined by Mr. Gurney, is *quā* form pleasurable, and its aesthetic value (as Fechner has so well shown), increases within certain limits with the number of distinctly recognisable points of diversity and unity.

is usually the central one, and, finally, their similarity and equality. A word or two must suffice in illustrating each of these aspects.

¶ (1) We have found a reason for introducing continuity of lines into pleasing form in the nature of ocular movement. Over and above the feeling of smooth transition thus given, a continuous as opposed to a broken arrangement is at once felt to be a unity. The movement of the eye around a contour to the point from which it set out, yields a peculiar feeling of gratification which may be called a sense of completeness.<sup>1</sup> The special æsthetic value of contour is seen in the custom of accentuating it in decorative designs by means of ornamental appendages. It is evident that this feeling for the æsthetic value of continuity in form will be developed by experience, which leads us to look on outline as the essential factor in the unity of objects.

¶ (2) Another mode of unity in form closely related to continuity is common connexion with one principal element of form, and more particularly with a dominant central feature. For the resting eye, as for the moving, the arrangement of parts about a centre has a special value as supplying the most natural mode of percipient activity. Owing, indeed, to the structure of the retina, the centre of an object or group of objects is naturally raised to a place of honour.<sup>2</sup> The eye is instinctively disposed to connect all parts of a design with some central element, and the recognition of such a common connexion with a centre gives to a design the artistic charm of unity. The most natural central element is, of course, a point, and there are many pleasing forms both in nature and in art which owe a part of their æsthetic value to the presence of such a connecting point. The circular and stellar or radiating forms, the scroll or volute, clearly have this central dominating factor. In many cases, however, the central element is a line or even some simple figure. Thus, all arrangements about an axis, as the forms of trees, flowers, and stems, and all like patterns, are pleasing. In decorative art, again,

<sup>1</sup> This is strictly analogous to the satisfaction which the ear derives from melodic movement, setting out from a given note (the tonic) and returning to the same.

<sup>2</sup> It is a distinguishing peculiarity of movements of the eye from the primary position outwards, that they are attended by no rolling of the eye about the axis of vision. As a consequence of this, in tracing lines which radiate from the centre of the field (exactly opposite to it), it continues to receive the image of the line on the same retinal meridian or series of retinal points, so that at any two successive moments the images partly overlap. This fact speaks for the supreme importance of estimating direction and distance in relation to the centre. It may be added that Mr. Ruskin recognises the principle here illustrated under his Laws of Principality and Radiation.

a central feature is frequently supplied in the shape of some small circle or rectilinear figure.

(3) The third aspect of unity, similarity of parts, includes likeness of direction, equality of magnitudes, proportion, &c. All pleasing forms present similarities of direction, simple and compound, and the characteristic beauty of many forms, both in nature and in art, is traceable in part to the prominence of some one element of direction. Thus the various charm of the forms of cedar and birch among trees, and of the Romanesque and Gothic among architectural styles, is partly due to the predominance of some characteristic feature, as the horizontal or drooping line, the rounded or pointed arch.

The sense of equality enters into geometry much more prominently than into visual art; yet it is not excluded from the latter, it only appears in a more disguised way. All equalities of magnitude among lines, surfaces, &c., are, to speak with Fechner, above the threshold of enjoyment, and the study of art in all its branches shows that this enjoyment is an appreciable quantity. Among the equalities to which the aesthetically cultivated eye is specially susceptible are those in change of direction, whether angular or curvilinear. In all regular rectilinear figures equality of angle is appreciated as well as that of linear magnitude. The moderate beauty of uniform curves and of undulating lines rests in part on a feeling for this factor of regular and equal change.

That relations of proportion enter into beautiful form, is allowed by all. A technically trained eye may recognise, and perhaps enjoy, simple numerical ratios among magnitudes in lines, &c., but this factor does not appear to enter, in a conscious way at least, into ordinary aesthetic appreciation of form. We hardly experience any addition of enjoyment in learning that the ratio of the axes of a pleasing oval is 2:1. So far as conscious reflection can tell us, our enjoyment of proportion rests on a vague estimation of one magnitude in relation to another. But though this relation is not numerically appreciated, it is very exactly estimated. Our enjoyment of the subtle relations of linear magnitude which enter into the beauty of a refined face shows how delicate this quantitative appreciation really is.

It is to be observed further that this fine sense of proportion among the various parts of a visible form includes a recognition more or less distinct of an equality between relations of magnitude. And it is this fact which brings the sense of proportion under the head of a feeling for similarity and equality. This is plain enough in the case of all imitative forms. The recognition of a face by means of a miniature portrait is really an example of a very fine perception of equalities of relation, for it rests on a

distinct appreciation of the relative linear magnitudes and distances of the several features, and on a perception of the identity of these relations with all changes in absolute magnitude.

It is hardly less certain that the sense of proportion in art, when not thus based on a knowledge of the relations of natural objects, really implies a recognition of the identity of quantitative relations. The enjoyment of a due proportion between the diameter and length of a column, or among the numerous details of a Gothic church, appears to involve first of all a recognition of the correspondence of the *perceived* relations with some *conceived* relations, which supply an ideal standard of proportion. This mental standard may repose either on a sense of utility or fitness of parts to a ruling end, on custom, or finally (in the case of the freer forms) on a vague feeling for the relative aesthetic importance of the several features as parts of a pleasing and well balanced whole. In addition to this the sense of proportion in art often rests on a direct comparison of two or more *directly presented* relations of quantity, as, for example, those subsisting between the subdivisions of the several vertical magnitudes in architecture, which are said to illustrate the ratio known as "the golden section".

These three aspects or moments represent the most abstract principles of unity of form. In practice, these principles commonly combine and blend one with another. This may be seen by a reference to what is known as symmetrical arrangement.

A symmetrical division of parts aims at presenting a number of continuous features under certain aspects of contrast and similarity in relation to some central element. Each element of the design is balanced against some other element opposed to it in direction (that is from the centre), but resembling it in respect of magnitude and distance from the centre. It thus supplies a large amount of the element of unity, and is indeed the most regular of all forms.

The most perfectly symmetrical figure is that which is so in respect of each pair of opposite sides or directions, as the rectangle, the polygon with even number of sides, the circle, &c. But such arrangements are apt to be too stiffly regular for art, which, needing abundance of freedom and variety, usually contents itself with symmetry in one direction, namely, bilateral symmetry. Why symmetry in a horizontal direction should please rather than in a vertical or any other direction will be explained further on.

It may still be objected that I am confounding art and science, and giving to unity and regularity an exaggerated aesthetic importance. This objection will, I think, be largely obviated by the observation, which I have hitherto postponed,

that the uniting element is often present in an *ideal* manner only, suggested to the mind rather than directly presented. Thus the continuity of a form has sometimes to be appreciated by help of an ideal completion. A crescent, for example, may please the eye because it is so easily expanded by the imagination into a whole circle. Much more frequently does the central element of a design need to be supplied by the mind of the spectator. The beauty of an undulating or of a spiral curve rests in part on a vague representation of the central axis, about which its seemingly free movements arrange themselves in so simple an order. In many symmetrical arrangements, too, as those of the human figure, the central element to which all relations are more or less consciously referred has to be put into the figure by the mind.

The value of such subjectively restored elements of unity is seen in a striking way in the fact that the feeling for order and unity may be satisfied when there is only an approximation to a regular arrangement. The eye, like the ear, can easily bear departures from rigid regularity, if only it is able in a rough and general way to group the details under relations of equality and symmetry. This it does in those freer forms of sculpture and painting which mark a high development of art. Provided this departure of form does not appear to the eye as an error, as a failure to reach perfect exactness; that is to say, provided it is seen to be intended and is felt to be justified, the fact of approximation yields an appreciable enjoyment. The visual imagination here supplements the visual sense, and sees a rightness where the latter alone would see but error.

It is easy to see, by help of this principle, that all the visual arts seek in some degree to satisfy the eye's feeling for form. In some arts, as painting, the element of form is no doubt a good deal subordinated to the exigencies of imitation, and of a wide picturesque variety of detail. Even in sculpture, perfect regularity of form is in the higher stages of art-development sacrificed in favour of variety of treatment and natural ease. In truth, the progress of art is largely a progress in freedom of treatment, as we may see by comparing the rigid symmetry of Cimabue with the graceful ease of Raphael, or the stiff regularity of early Greek sculpture with the freedom of the later and better work. Yet while the principles of form become less conspicuous, they are not wholly abandoned. A Madonna of Raphael may suggest the pyramidal form which an earlier altar-piece so naïvely forces on our attention. In other words, in the best periods of art, form only disguises itself, becomes more a matter of imaginative reconstruction, and appeals to a finer kind of æsthetic perception. One may add that every now and again the artist

will distinctly aim at satisfying the eye's feeling for form by what may almost seem a childish device. Even a Turner does not disdain to please the eye by introducing into his pictures accidental repetitions of form in different objects.<sup>1</sup>

All good art thus does homage to the principle of form. One may even go further, and say that the characteristic effect of asymmetry, illustrated in many Japanese designs, is really due to a just feeling for form. Like discords and occasional suspensions of tone-interval and equal time in music, such irregularities owe their piquancy to the very sense of a law that is broken, not violently, but, so to speak, in childish freakishness.

In this brief analysis of the direct factor in pleasing visual form, I have regarded the immediate activity of the eye as something ultimate, only referring now and again to the effects of habit in facilitating certain kinds of motor activity. But modern psychological ideas will enable us to explain to some extent how the eye has come to be so constituted as to take pleasure in the kinds of activity just described. There is no room here for more than a brief elucidation of this aspect of the subject.

The doctrine of evolution leads us to view an organ of perception, together with its customary modes of action, as slowly determined by the action of the environment and the needs of practical life. A part of this operation goes on in the individual life, having as its result the selection of the habitual actions as the most easy and most agreeable. A part requires the life of the race for its carrying out, and has for its product a certain innate structure and disposition. The modes of agreeable visual perception illustrate these processes of adaptation to the conditions of practical life. Thus, as I have already hinted in passing, the eye's preference for the horizontal direction, for symmetrical movements of convergence and so on, may possibly be explained as the result of habits determined by the greater utility of these particular movements. And it is probable, as Wundt suggests, that the innate peculiarities of the eye's mechanism which favour certain kinds of movement, as horizontal, and those from the centre of the field, are themselves the result of long processes of racial adaptation.

What applies to the most natural and agreeable modes of ocular movement, applies also to the more pleasurable modes of the higher intellectual appreciation of form. The very feeling for unity of form in any shape is probably related to those deep wants of our existence which have determined the structure of

<sup>1</sup> Mr. Ruskin brings this effect under his Law of Repetition. He calls attention to two instances of it in the water-colour paintings of Turner exhibited by him in 1878.

our intellectual organ to be what it is. And in the case of the æsthetic value of the several modes of this unity, the action of the environment becomes apparent. Thus, for example, the natural instinct of the cultivated eye to look for a well-marked contour, as well as for a central element of repose, in a design, may be regarded as the result of ingrained habits, determined by the conditions of a distinct visual grasp and recognition of objects in every-day life. So the desire of the eye for proportion seems to be an outgrowth of a habit of attending to relative magnitude, a habit that is clearly connected with the paramount importance of identifying objects at different distances from the eye.<sup>1</sup> And it is possible that the preference for the ratio known as "the golden section" in art, a relation which, according to Zeising, is found exemplified in the various proportions of the human figure, may be due to a habit of making that most impressive and carefully observed form a standard of measurement.

The æsthetic value of symmetry, and more especially bilateral symmetry, illustrates in a striking way this action of the environment and of habit in determining our most pleasurable modes of activity. Mr. Grant Allen has recently remarked on this fact (MIND XV.), but without any special reference to *bilateral symmetry*. Not only do most organic forms present such a bilateral symmetry, but the forms of inanimate nature, as mountain and valley, show this same relation. The very action of the physical forces determining the configuration of the earth's surface, tends to produce a bilaterally symmetrical arrangement, as we may see by the simple experiment of throwing down a heap of pebbles or sand on the ground. Over and above this the ends of support, and the utilities of life in general, serve to give bilateral symmetry a high practical value. Most of the products of the useful arts, from architecture down to the art of constructing common utensils, possess this bilateral symmetry. This prevalence of the relation, in objects of daily perception, would serve to fix a habit of looking for symmetry as the normal form of things. In other words, bilateral symmetry would tend to become, to speak after Kant, a sort of *à priori* form of æsthetic intuition.<sup>1</sup>

But this direct factor is, after all, only one feature of visual form, which, in concrete æsthetic perception, combines with other indirect or associated elements. Over and above the direct

<sup>1</sup> I know a child that, when three years old, at once recognised the faces of several relatives by means of a photograph taken eight years before. The photograph was a *carte de visite* group, in which there were just a dozen full length figures, as well as a good piece of background space. Such a power of appreciating form, shown at so early an age, suggests that there may be an innate disposition to recognise identity by means of equality of relative magnitude.

action of the environment, and of customary experience in producing an instinctive preference of the eye for some kinds of activity, there is an indirect action of experience in attaching to certain elements and arrangements of form an aesthetic value by reason of associated feelings and ideas. This other great factor in visual form has received a fair amount of attention, and it does not call for more than a brief notice here.

#### ASSOCIATED FACTOR.

So far as forms are strictly non-imitative, and not determined by any needs of fitness to some recognised practical end, the associated factor must reside in certain comparatively abstract qualities. These are in the main resolvable into two classes, those aesthetic aspects which depend on association with touch and movement, and those which involve an idea of human skill.<sup>1</sup>

If tactful and muscular experiences (other than those of the ocular muscles) are organically embodied into our customary visual perceptions, we shall be prepared to find that the pleasurable side of visual form embraces elements drawn from this region. In truth, all the valued features of form may be said to involve such extraneous feelings. The superior importance of the vertical and horizontal directions, the specially restful character of the horizontal, and the aspiring aspect of the vertical, the voluptuous nature of the curve as opposed to the severity of the straight line, point to these deeper and fuller experiences. Even the value of bilateral symmetry for the eye may owe something to that well-marked rhythmic contrast of right and left, which the movements of the tactful organ yield to us. Again, it is easy to see that the various charm of distance, the wooing character of the remote and retiring, and the stimulating aspect of the near and prominent (reflected in a degree in the different effects of convex and concave surface), and the sublime suggestions of great height, all draw their material from experiences of the greater motor organs. So, too, our larger muscular experiences, with their new feeling of resistance and distinct sense of force, furnish elements to our appreciation of fragile grace appearing to ask for support, and of all stability of form. Lastly, the residue of tactile experience (alone or in combination with muscular sense) is traceable

<sup>1</sup> A third class of such general and abstract associations might be constituted by the symbolic aspects or the moral and religious suggestions of form (as that of moral rectitude, infinity, &c.), but these are too vague and uncertain to require notice here.

plainly enough in the charm of smooth and rounded surface, of that characteristic quality of sculpture which Mr. Ruskin has well called its "bossiness".<sup>1</sup>

The second class of aesthetically valuable suggestions in the visual perception of form are those of human skill. Man is a constructive animal, and his habits of construction lead him, as Mr. Grant Allen has observed, in the essay already spoken of, to view all forms in nature, as well as in art, in relation to the degree of skill needed to produce them.<sup>2</sup> Thus a perfectly straight line, even in nature, irresistibly calls up a vague consciousness of artistic finish. The peculiar charm of all smaller and more delicate forms rests in part on this vague feeling of fine workmanship. So, too, all perfect regularity and symmetry satisfies this feeling for perfection of handicraft. And, on the other side, departures from regularity when they suggest the idea of bad workmanship, are, as I have already remarked, distinctly unpleasant.

In addition to these wide-spread abstract associations with form, there are more circumscribed and concrete associations depending on a vague resemblance to some agreeable natural form. Of these associations, the suggestions of human form constitute the most valuable aesthetic element. The supreme interest of the human presence makes us ever ready to see analogies to the human attitude and mode of movement in inanimate nature, and so we fall into the habit of attributing a quasi-human interest to the drooping plant, the stalwart tree rejoicing in its battles with the wind, and the venerable mountain looking down on our lower earth with an expression of Jovian calm. Art, when not distinctly imitative, owes something to these vague suggestions. Thus, we are disposed to transform supporting columns into Caryatides before art itself transforms them for us. Next to the human figure, other of the more beautiful organic forms may furnish such associations to the eye. Thus, the Corinthian capital, and forms frequently found in ornamental design, please the eye in part through a vague feeling of their plant-like character.

The reader may perhaps expect me to assign the relative values to these various factors in agreeable form. But psychology is not yet a quantitative science; and this being so, aesthetics must be content with enumerating the elements, without seeking to measure exactly their relative values. I have insisted on the

<sup>1</sup> Herder calls sculpture the art of touch, in contradistinction to painting the art of sight.

<sup>2</sup> This idea of skill will, in the case of the useful arts, take the form of an intuition of a nice adjustment of means to ends and so become a component element in the sense of fitness.

presence of a direct sensuous element in visual form apart from the pleasures of light and shade. In daily experience we may not be aware of the pleasure which ocular movement in its real or ideal form is fitted to yield, just because our eye usually attends to these movements only as signs of important objective facts. But when this significance is withdrawn, as in a decorative arabesque design, we may easily become aware of the pleasurable character of such movement. And it must be supposed that this element enters as a very appreciable factor into the whole delight which sculpture and architecture afford us. Even though not a considerable pleasure in isolation from other modes of enjoyment, it may contribute a valuable factor to such a compound aesthetic impression.<sup>1</sup>

But though emphasising these elementary motor experiences of the eye as a factor in agreeable form, I would not exaggerate their importance. It must be remembered that the experiences of touch and extra-ocular movement are inseparably embodied with ocular feelings of movement in the eye's perception even of form-elements, and the former are at least equally valuable with the latter. For the rest, I attach much value to the intellectual factor in the appreciation of form; that is, the co-ordination of numbers of these slightly pleasurable elements under agreeable relations of unity and proportion. Taking the factors just named as the *direct* factor, and contrasting them with the less directly associated elements as the *indirect* factor, I should say that the former decidedly outweighs the latter in what we call beauty of form. Every beautiful form will, I think, be found to owe its charm in the main either to the specially pleasurable character of its elements (ocular or tactual), or to the presence of a large number of distinct aspects of variety and unity. The former is the beauty of simple forms, the latter that of intricate forms.

As to the value of the less abstract associations, on which Mr. Gurney has insisted in the article already named, I think that, though real, it is far less in the case of visual forms than of melodic forms.<sup>2</sup> I quite agree with him that the nameless charm of some melodies must be attributed to processes

<sup>1</sup> According to Fechner's principle of aesthetic support (*Vorschule der Ästhetik*, pp. 50, ff.).

<sup>2</sup> Not because it is easier to combine elements of form than elements of tone in ways which shall not remind us of real experience: it should be less easy because tones themselves are less imitative than the elements of visual form; but rather because the emotional suggestions are less powerful in the former case than in the latter. In the case of the charm of a concrete form, as that of the human face, I hold with Mr. Gurney that suggestion may be as powerful an influence as it is in melodic form.

of suggestion too subtle for us to retrace. But in the case of visual form, the associated elements appear to me to be in general much more definite and easily recognisable, and though, as I have pointed out, the æsthetic value of free and non-imitative forms may frequently be referred in part to associations with particular objects, such associated elements seem to me never to constitute the main beauty of these forms. Speaking, then, with the hesitation which becomes all utterance on a subject where precise scientific determination has to be replaced by vague individual opinion, I should say that those varieties of art in which visual form counts as the chief end, more particularly uncoloured decorative designing and architecture, contrast with music as well as the distinctly imitative arts in the weakness of their (indirectly) associated factor, as they certainly contrast with music and the arts of colour in the weakness of their direct sensuous element.

JAMES SULLY.

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### III.—PAIN AND DEATH.

SOME three years since, in my little volume of *Physiological Aesthetics*, I put forth certain views on the nature of pleasure and pain, which then appeared to me a slight advance upon the main theory already elaborated and demonstrated by Professor Bain and Mr. Herbert Spencer. A chapter in that work endeavoured to show that, while pleasure was the subjective concomitant of due activity in any or every organ directly continuous with the cerebral centres, pain was more specially connected with actual destruction or disruption of sentient tissues. These opinions still appear to me to be well-grounded; but certain further modifications have since occurred to my mind as more fully elucidating the true nature and origin of the feeling of pain. I propose in the present paper to discuss somewhat cursorily such additional *aperçus*, and to point out certain apparent corollaries as regards the present function and value of pain in the human economy.

An absolutely perfect animal, adapted in every possible particular to every possible variation in its environment, would have no need whatsoever of pain as a warning against impending dissolution. The external marks of approaching danger would be followed instinctively or automatically by the proper movements for ensuring full self-preservation. Such an ideally perfect self-conserving machine, whether figured as conscious or

unconscious, would always by the laws of its mechanism respond directly to every conceivable combination of circumstances unfavourable to its continued existence as an organised whole, and would respond in such a manner as to prevent its threatened annihilation or disorganisation from being actually effected. To put the case concretely, it would meet the phenomena which herald the approach of famine by storing up provisions in advance; the approach of flood by building an ark of safety; the approach of conflagration by providing fire-proof dwellings and absolutely archetypal water-hose extinguishers. Disease it would not know, for it would never overwork its digestion at one period, to sow the seeds of dyspepsia in another; nor would it expose itself to chills and draughts, to become the future parents of consumption and bronchitis. It would never burn its fingers in a fire, tear its flesh with nails and splinters, or overwork its eyes in poring over microscopical Greek type. Thus it would have no need of the monitor we call pain; and what is more, it could not practically experience it—unless, of course, under conditions quite unlike those of existing animals. For since pain, within the limit of our experience, is the concomitant of actions directly or indirectly tending towards dissolution of the organism, and since by our hypothesis the ideally perfect animal would never expose itself to such actions, whether coming from within or from without—it must follow that it could never feel pain under the only conditions in which we know it to occur. If the ideal animal, thus conceived, be envisaged as a separate creation, we should expect that it would be created painless; or if it be envisaged as the result of evolution from existing types, then we should expect that the faculty of feeling pain, which it potentially derived from its ancestors, would be practically never evoked for want of the proper exciting circumstances. Pain would not then be in the position of a feeling which had survived its function: it would be simply a feeling which had ceased to exist for want of exciting cause, just as vision has ceased to exist in some of the not yet quite blind fishes and reptiles of the Carinthian caves.

It may be objected that such a fanciful picture as this can be of little use in practical psychology, just as the fanciful pictures of political economy are said to have caused much fallacious reasoning in that department of thought. But in reality these imaginary diagrammatic cases are never dangerous, if only they are accepted in their true light as isolated aspects of the concrete phenomena under investigation. I hope the reader will recognise in the sequel that this simplified ideal form is of real use in enabling us to grasp the bearings of our problem.

Our perfect animal, then, may be conceived of either as en-

dowed with "perpetual motion," in which case, of course, it would never die at all; or, in stricter accordance with the theory of dissipation of energy, it may be conceived as having a natural termination to its organised existence, in which case its life would be an *equilibrium mobile*, as Mr. Herbert Spencer puts it, ending in the "final equilibration" of death.

Now, stopping short of such an absolute ideal as that rudely sketched out above, let us consider from this point of view the realised ideal of the animal world in its highest existing outcome—a prudent, moral, healthy, civilised man. Such a man possesses an intellectual recognition of the fact of death: he knows that, sooner or later, his existence as an organised being will come to an end. He knows also several of the modes in which this destruction of his concrete identity may take place—as by disease, starvation, drowning, fire, violence, or accident. And in so far as he is prudent and normally healthy, his main personal object in life (taking into consideration his isolated individuality alone) will be to avoid all such premature forms of death, and to continue his own full organic activity in every particular up to the time of his final and inevitable dissolution. In so far as he is healthily moral, again, his main object in his relation to other individuals will be to prevent for his friends and dependants, and so far as in him lies for all others, the same premature forms of death, and to ensure for them the same full organic activity up to the time of their necessary end. For this object he will, at the very least, abstain from such actions as will interfere with their organic activity, such as killing, beating, stealing from, or traducing them. But with these latter moral considerations we have nothing to do here, and I merely notice them to tone down the apparent (but only apparent) harshness of the previous statement that the main personal business of a prudent and moral man is the avoidance of his own premature extinction, and the maintenance of his own full organic activity up to the latest possible point.

Apart from all considerations of pleasure or pain, the principles here noted are clearly implied in the very nature of organic life. If an intelligent being, propagating its like by heredity, were to be conscious that a certain line of conduct ended in premature extinction, and were yet to follow it by preference to another line ending in full organic activity for self and offspring, such a being must inevitably tend to extinction, both individually and generically (or rather genetically). This we actually see in the case of suicides, habitual drunkards, and opium eaters. On the other hand, all those amongst its contemporaries—its competitors in the struggle for life—who refrained from such self-destructive lines of conduct, and pursued more or less completely the oppo-

site line which tends toward the fullest preservation of self and offspring, would thereby themselves continue to exist, and would become the parents of the most numerous, the most healthy, and the most successful descendants. This we actually see, on an average, amongst all the prosperous and vigorous families in the world around us.

Thus it follows that we might conceive of intelligent creatures to whom the preservation of their own lives and that of their fellows had become, by hereditary transmission, an *organic* end in itself, a something aimed at as it were by instinct, apart from any feeling of pleasure and pain. There can be little doubt that this is to some slight extent the case even in our own species. We shrink organically from any immense impending danger: we run, without thinking why, from a levelled gun, a falling rock, a springing wild beast: we snatch a child instinctively from the wheels of a carriage or a railway train. Setting aside the superstitious fears with which death has been long surrounded, and the natural reluctance to grieve friends and dependants by total removal from their sphere, every-day language and experience seem to imply that most healthy persons, even amongst the emancipated class, have a strong and deep-seated personal repugnance to the idea of death for themselves. But this feeling has probably or all but certainly arisen since the notion of death as a possibility for oneself has been formed within the human consciousness. There is no reason to suppose that animals ever figure to themselves their own future extinction, and even the human mind seems to have reached the conception by very slow degrees. Our whole experience being that of a world in which our own consciousness forms the constant central factor, it is only by a violent exercise of imagination and analogy that we are enabled to conceive the existence of a world in which other consciousnesses alone remain. Even the final dissolution of his own organic body must have been to the primæval savage a late and slowly-acquired idea. At some time or other a developing anthropoid, seeing the anthropoids about him fall one by one in battle or by old age and decay into the dust, must have said for the first time to himself or to his neighbour, "We too must die." And now, by long repetition, that familiar phrase, "All men are mortal," has become an integral part of our whole reasoning life. Yet even to this day it is doubtful, as anthropologists tell us, whether the lowest savages have fully grasped the notion of death as an inevitable certainty for themselves and their friends. They regard it rather as a special and exceptional accident.

Here, then, we get a certain amount of light shed upon the nature of pleasure and pain. If all animals were and had always been highly intelligent, if they all had clearly before their eyes

the conception of death as a possible occurrence to themselves, if they definitely set its avoidance before them as the main object of their lives, and if they were rationally able to interpret all the threatenings of danger afforded them by external phenomena, there would never have been any necessity for the existence of such feelings as pleasure and pain. But inasmuch as all animals were originally unintelligent, as they had of course no conception of death, and as they were therefore incapable of rationally interpreting the menaces of surrounding nature, it became necessary that they should possess a quasi-automatic mechanism for the avoidance of what was hurtful and the pursuit of what was salutary. Such a mechanism is afforded by the feelings of pleasure and pain.

How those feelings originated we can no more say than we can say with any other part of consciousness. No sleight of mouth can bridge over for our present intelligence the unfathomable gulf between the insentient and the sentient. That consciousness should evolve out of the unconscious is perhaps inconceivable: that it should evolve out of some primordial mind-stuff, as Professor Clifford supposed, out of some subjective germ, some embryo spiritualistic side in the primitive atom, as I understand Mr. Herbert Spencer to suggest, is conceivable indeed, but scarcely picturable to our minds. Consciousness seems, in fact, incapable of grasping its own ultimate analytic unit, save in some very symbolical and indefinite sense. But that there was once a real objective world, in which consciousness existed only in this nebulous form, I for one must continue to believe, in spite of the arguments of idealists to the contrary. I cannot picture to myself a world without perception, a universe with no phenomena, but I am compelled to believe in it. And when this relatively unconscious world, this mass of unpicturable matter in which mind only potentially existed as unorganised mind-stuff, or as consciousness-nebula, first developed something like that orderly arrangement of mind-units which we call feeling, it seems to me fairly certain that the earliest of such feelings must have been pleasures and pains. In other words, I think that pleasure and pain must have been (relatively speaking) the primordial form of consciousness. I say relatively speaking, because I do not mean that they are primordial in the sense that the supposed ultimate mind-unit is primordial, but merely that they were apparently the first feelings recognisable as such, the earliest element of mind to be developed into a form now within the reach of our analysis.

How it could have been otherwise is difficult to see. For all perception and all intelligence have only a meaning so far as they relate to possible pleasures and possible pains. The animal

sees its food that it may eat it; sees its enemy that it may avoid his tearing fangs. Every fresh sense becomes a guide to further pleasures, a warning against further pains. Every increment in intelligence is merely an increase in the number of combinations by which the organism anticipates the one positively and the other negatively, through an ever widening distance in space and time.<sup>1</sup> In fact, pleasures and pains are the real central substance of our whole lives, all other portions of consciousness being merely subsidiary to these fundamental and all-important primary feelings.

But though it is difficult to say how such feelings could ever have originated in a relatively insentient world, and though we can only symbolically represent to ourselves the mode of their origination by a clumsy materialistic picture of mind-units set side by side in a definite order, just as the atoms which form their objective counterparts are definitely arranged to make up a polyp or a man,—it is nevertheless easy to see why such feelings, once started, should go on to increase in definiteness and in strength. For since a pain, which is objectively known as the correlative of disruption or destruction, is subjectively known as “a feeling which we seek to get out of consciousness and to keep out”; and since a pleasure, which is objectively known as the correlative of due function, is subjectively known as “a feeling which we seek to bring into consciousness and to retain there,” it would necessarily follow that all those individual organisms which possessed these feelings in the highest degree would most uniformly avoid self-destructive actions and pursue self-conservative actions. If we suppose that any animal were actually to delight in self-destructive actions and avoid self-conservative actions, we can see at once that it and its kind must necessarily tend to become obsolete. And this is not a mere hypothetical case, for many animals do actually, under certain circumstances, contract self-destructive or race-destructive tastes, and do accordingly in so much tend to die out. But none the less it is inconceivable that such a combination as that between ultimately destructive activities and the subjective sense of pleasure should ever become permanent and habitual: and even the apparent temporary combination resolves itself on ultimate analysis into a mixture of immediately pleasurable feelings with ulterior life-destroying effects.

Again, there is, it has always seemed to me, a certain curious correspondence between the subjective feeling of pain and the notion of bodily destruction, as between the subjective feeling of

<sup>1</sup> I need hardly mark here my obligations to Mr. Herbert Spencer's *Principles of Psychology*, which are sufficiently obvious throughout.

pleasure and the notion of due bodily function. In what the sense of fitness consists it would be hard to say, and many people will think it fanciful; yet it has long appeared to me an important point in the question of the connexion between object and subject.

Mr. W. James has observed on this point (MIND XIII., p. 18) that "the only very considerable attempt to explain the *distribution* of our feelings" is the one given in my *Physiological Aesthetics*, and, he says, its "reasoning is based exclusively on that causal efficacy of pleasures and pains which the 'double-aspect' partisans so strenuously deny". But it does not seem to me that this implication is really contained in the view here expressed. For the fact is that the very separateness and non-interference of the subjective series and the objective series makes it impossible to treat pleasures and pains save under both aspects. No doubt, if we could trace the whole series of physical actions which take place in our nervous system when the sight of a pleasant or painful object sets up a certain set of movements in our bodies, we should see that the objective series on its side was perfectly explicable upon merely mechanical grounds—that energy was liberated in certain ganglia by the incident light-rays, and that this energy, undergoing certain definite recombinations in other ganglia, finally produced, on purely physical principles, the appropriate movements. We should find, I believe, that the whole set of movements could be mentally pictured as similarly occurring in a perfectly insentient automaton. But then, on the other hand, we know that the subjective series, on its side, gives us a completely parallel set of facts, which can only be expressed in subjective terms. We say truly that we saw the fruit, that we liked it, that we willed to eat it, and that the act of willing resulted in the eating. And after all, the subjective facts are the real and certain ones, while the objective facts are only hypothetical pictures of the subjective experiences which might be realised by an imaginary spectator if he could see inside our brains. Accordingly, it is quite open to us to treat the subject from either point of view, without at all deciding the question as to their mutual relations. I am so thorough-going a "double-aspect partisan," that I refuse entirely to dissociate the two aspects, or to assert that there is any such "causal efficacy" whereby the mental side interferes with the strictly physical current of the bodily side. I know the two sets of phenomena only in their union, and I cannot say what the mental side might or might not do in isolation. They seem to me not two things, but two ways of looking at one and the same thing.

To resume our main thread of exposition. The feelings of pleasure and pain thus originated, though on the whole good

rough guides for action, are far from being perfect guides. On the contrary, they are only approximately accurate, like most of the other adaptations of organisms to their environment. Their original form of correspondence is apparently very simple. Not *every* kind of hurtful action is painful, but only one most common kind. So, not *every* kind of desirable action is pleasurable, but only a few most desirable kinds, at least to any noteworthy degree. As soon as feeling exists at all, it seems probable that that feeling is aroused in the painful mode by any attempt to dismember or destroy the organism. To the last, this remains the chief form of physical pain. To cut, tear, or pull off a limb or tissue, to burn or otherwise chemically disintegrate any part of the body, is the commonest species of pain. Other special species, such as to din the ears, dazzle the eyes, burn the tongue with pungent substances, or fatigue the limbs with over-exertion, all agree at bottom, as I have endeavoured to show elsewhere,<sup>1</sup> in this fundamental point, that they imply destruction or excessive waste of tissue. On the other hand, the two main functions of animal life, feeding—which is necessary for the continuance of the individual—and procreation—which is necessary for the continuance of the race—are apparently accompanied by pleasurable feeling in the very lowest animals which show any trace of feeling in any shape, while most other organic functions are comparatively neutral. A special reason for these restrictions will be treated of hereafter.

Intelligence is solely useful to the animal inasmuch as it enables it to compass more pleasures and avoid more pains or, in other words (putting it objectively), to perform a greater number of life-serving actions and to avoid a greater number of destructive agencies. But inasmuch as pleasure and pain will be of comparatively little use without so much memory as will suffice for the formation of an *experience*—for a single pleasure or pain once felt and then forgotten would not act as a guide in future cases—it would naturally follow that the increase of intelligence would be accompanied *pari passu* with an increased sensitiveness to pleasures and pains. This *a priori* inference seems likewise (so far as our blind guesses allow us to conjecture) to be borne out by facts: for the higher and more intelligent animals all exhibit the supposed phenomenal signs of pleasure and pain far more distinctly than the lower and less intelligent. The memory of a past pain becomes with them a deterrent from the line of conduct which would end in pain; and the memory of a past pleasure becomes the inducement to a line of conduct which actually ends in similar pleasure. And at the same time

<sup>1</sup> See *Physiological Aesthetics, passim.*

the pleasures and pains themselves become, apparently, more vivid and more definite.

So far, we have only spoken of physical pains. But with increasing development there comes a point at which a second class of pains is introduced, which are commonly called mental. Of course, however, all kinds of pain are, strictly speaking, mental, while on the other hand they all possess a bodily counterpart. It would, therefore, be more correct, perhaps, to speak of the first class as nervous and the second as cerebral or central, though even this distinction is by no means free from ambiguity. To treat of these pains at full length would be beside the present purpose. It must suffice to say that they are of several kinds—some personal, as the feeling of worry, bother, difficulty; others altruistic, as sorrow for loss of friends, sympathy, and so forth. But they apparently agree more or less with physical pain, in the fact that they are concomitants of a waste of tissue, an excessive expenditure of energy. On the subjective side, however, they differ in being rather *distresses* than *pains proper*. The true painful element, which we see exemplified in pulling a tooth or cutting off a limb, is wanting: the feeling of distress sometimes approximates a little more to that of bodily weariness from over-exertion. In fact, the pain of mental grief has probably for its physical counterpart an excessive waste of brain-tissue, just as weariness has for its physical counterpart an excessive waste of muscle and nerve-tissue.

Now, amongst the lower animals, the immediate pains of bodily disruption, as exemplified in scratches, bites, blows, kicks, and the like, are the most powerful and important. But with man, and especially with civilised man, the representative pains of the cerebral class are the most important. Moreover, as bodily pain is merely connected with actual disruption of tissue, which is after all only a rough gauge of desirability, it often happens that man must bear one bodily pain to avoid a greater or a mental pain. Hence it turns out that for man, to a considerable extent, bodily pain is a feeling which has outlived its function. When we are infants, it is true, pain is to a great extent a useful monitor; but in after-life it often happens that it is really a useless encumbrance. We see this in the demand for anaesthetics. The pain of drawing a tooth, of amputating a diseased limb, of undergoing a surgical operation, is of no use whatsoever to us. Even pricks, scratches, burns, and internal pains are for the most part of little good to us. Our tissues have inherited from their ancestors a sensibility which is comparatively seldom of any practical value, and which under certain circumstances becomes a positive disadvantage. Intelli-

gence now largely supplies the place which pain once supplied. No sensible man—nay, no fool even—would ever cut off his hand, even if the operation were painless, because he knows he will want his hand in future: just as no man throws away a valuable implement. So the pain which he must undergo if he is obliged to have his hand amputated is so much dead loss to him. In the end of life, especially, pain obviously is of no further use to the organism, and a simple means of alleviating or removing it during the last moments becomes a clear desideratum of humanity.

On the other hand, we must not forget that pains whose function is apparently obsolete may yet have some unsuspected use in our economy even at the present day. Thus, Mr. Sully, commenting upon this very theory of pain, asked in *MIND* VII., p. 389, of what use were “the torments attending an injury to the dental nerve”. In the next number of *MIND* I endeavoured to answer his question by pointing out the immense importance of teeth to our anthropoid ancestors, who used them not only for mastication, but also in the place of numerous human implements; yet I allowed that in man the large dental nerves might be regarded as somewhat unnecessary survivals, since man does not often run much risk of breaking his teeth. Some time afterwards, however, I happened to mention the subject in conversation with a medical friend, and he at once objected to such a conclusion, on the ground that the dental nerves still fulfilled a most important function in the human body. For our teeth, as he rightly pointed out, are extremely liable to decay early, from the artificial nature of our food; and this decay and consequent loss prevents us from masticating properly, and so gives rise to dyspepsia, with a whole train of subsequent diseases. Thus, a twinge of toothache, by inducing us to go to a dentist and have the decay arrested, helps to preserve our digestion and ultimately our lives. From this point of view, we can hardly consider the dental nerves as excessively large, considering the immense importance of proper mastication and digestion to health and longevity.

Again, though bodily pain (in spite of such exceptions) is thus often quite useless, we must remember that the mental pains are in great part made up of representations of bodily pains. And as the latter are undoubtedly important for our guidance and preservation, we must allow that bodily pain as a whole still indirectly subserves an important function even in human life.

Pleasure, on the other hand, of course even now keeps its function as fully as ever, for all our activities are and can be guided by pleasure alone in some form or other.

In the imaginary sketch given above of a prudent man, I have

supposed him to be governed ultimately by an abstract desire to keep up the cycle of his own organic activities to the very latest possible period. But in concrete life this is not the form which his desires actually take. No animal really wishes that its own functions, as such, should continue indefinitely in a certain manner. Amongst the lowest animals the immediate monitors of present pleasure and pain are alone regarded, and they are regarded without any conception of their ultimate implications. With intelligent animals, the whole possible body of pleasures and pains is taken into consideration, but still for its own sake only. With man, the conception of life as an end apart from special pleasures or pains arises, but even with man life is prized for the sake of the sum total of its pleasures, and not for the most part as an abstract end-in-itself. Thus, while in the scheme of nature (to use a transparent metaphor) life is the end, and pleasure and pain the means for its preservation, to the individual animal or the individual man pleasure and pain are the real motives, and life is either not regarded at all in itself, or regarded according to the proportion of its pleasures and pains. We say to ourselves, "Such and such a course will bring wealth, honour, prosperity," not "It will lengthen and preserve life"; or "Such a course will bring poverty, misery, distress," not "It will entail death". Hence, it happens that we sometimes pursue pleasures at the ultimate expense of life, or are induced by pains actually to court death, as is the case with suicides. Here pleasures and pains entirely miss their true function, and become subservient to self-destruction, instead of to self-preservation.

All this, however, inevitably follows from the mode in which feeling was originally developed. As the animal has no conception of death, it can have no conception of the preservation of life as an end-in-itself. Hence it must necessarily be guided by an immediate monitor, such as pleasure and pain. These feelings must then become deeply ingrained in the nervous system, and transmitted by heredity to all descendants. The impulse to obey the monitors in question must be practically irresistible, and when intelligence rises to the level where the conception of death is possible, it must still happen that the avoidance of pains and the pursuit of pleasures must be the main consideration, while the avoidance of death and the prolongation of life is only vaguely and occasionally present to the mind. And since the two aims are on the whole practically identical, the one serves very nearly as well as the other. It is only when (as with the drunkard or the suicide) the two diverge that the guidance of pleasure and pain becomes opposed to self-preservation. In such cases (to employ the same metaphor once more) we may say that nature has planned clumsily, and has therefore missed

her main object. The means which she adopted for ensuring self-preservation have, through their too great generality, finally led to self-destruction.

It may be worth while to add that in all pleasures and all pains what is absolutely the means to an ulterior end is relatively an end-in-itself to the particular animal. Thus, in taking food, the gratification derived is the end so far as the individual is concerned; but self-preservation is the object of nature. So in procreation, the gratification is the end to the individual; but race-preservation is the object of nature. Once more, the pain of the burnt finger is a negative end to the child, a thing to be avoided for its own sake; but nature avoids it for the sake of preserving the child's hand intact. And lest anyone should imagine that I am here unduly anthropomorphising nature, I shall add that the expression is a loose but convenient representation of the fact that the feeling exists through natural selection because it favours the preservation of the individual and of the species.

And now let us turn briefly to another question—the question of the special limitations of pleasures and pains. Mr. Sully, in the critique quoted above, objects that the painlessness of certain internal diseases, in which, nevertheless, disruption of tissue obviously occurs, is a weighty argument against the view here put forward. At first sight this appears a serious difficulty, but I believe it is only an apparent one. Let us see the reason why.

A pleasure or a pain can only be of use through the impulse which it gives to voluntary muscles. Conversely, a voluntary muscle is only of use to obey the impulses of pleasures or pains. To a wholly automatic animal, whose whole life consisted, let us say, of regular rhythmical contractions and expansions, the feelings of pleasure and pain would be useless—that is to say, they would not aid it in keeping up its individual and generic life. In exactly the same way, to any part of an animal (such as the vertebrate heart) whose whole functions consist of such rhythmical movements, the feelings of pleasure and pain are useless. The heart's business is simply to beat, and it is encased within the body out of harm's way. So long as it beats, it does its work well; but when it begins to get disintegrated or diseased, an animal cannot possibly by any voluntary movement do anything to repair it. On the other hand, the muscles and the sense-organs are all intimately connected with the environment. They are capable of receiving very various impulses from the environment, and of reacting accordingly. They may be scratched, torn, or otherwise hurt: they may encounter food, drink, mates, or other desirable objects. Hence it becomes useful to have a very different form of nervous system for these

two sets of organs. The heart and the like automatical portions of the body require on the whole a motor system only: the muscles and sense-organs require in addition a system sensitive to pleasure and pain. In short, feeling is intimately associated with the voluntary or so-called animal side of our organisation, as opposed to the automatic or so-called vegetative side.

If we begin to lacerate or burn a muscle, we can withdraw it from the injurious action, and so prevent further injury. But if we begin to have a lesion in the heart or lungs, we can do nothing (save by round-about medical or hygienic methods of late human origin) to stop the mischief. Answering to these two sets of organs we have two main nervous systems, the cerebro-spinal or voluntary, and the sympathetic or automatic. The first is on the whole a sentient, and the second an insentient system.

Nor is this all. I believe that cerebro-spinal nerves, involved in feeling pleasure and pain, are, roughly speaking, distributed to the principal bodily organs exactly in proportion to the value of such warnings in each case. For example, the organs of reproduction and the tongue are seats of strong pleasures, which are highly useful for race-preservation and self-preservation. The tongue is, furthermore, a seat of specialised pains connected with destructive or disadvantageous foods, and known as bitter, acrid, or pungent tastes, besides possessing the common painful sensibility to laceration or burning. But inasmuch as, when food has once been swallowed, all voluntary power over it is lost, the stomach and intestines are relatively insentient. So the eyes, which are delicate and exposed organs, are supplied with protective nerves, whose painful stimulation acts as a warning against danger; while they are comparatively little endowed with (immediate) pleasurable feelings. The ears, far less exposed, and incapable of voluntary motions, only feel pain in case of disease. In the muscles, pleasure is comparatively little felt in ordinary exercise, because such exercise is neither specially necessary, nor always useful, nor does it stand in need of a strong stimulant; but they are well supplied with nerves capable of feeling pain, because they are very liable to lacerations or other disintegrating actions. And those tegumentary modifications, such as teeth or nails, which are at once particularly useful and particularly liable to injury, are very richly supplied with pain-sentient nerves. On the other hand, most purely internal organs, which can seldom suffer from outer violence, and over which the will has no power, are mainly innervated from the sympathetic.

Perhaps, however, the most conclusive instance is that of the mammalian testes, which, though they are secreting glands ana-

logous to others in the interior of the body (which have no cerebro-spinal nerves), are yet, on account of their exposed situation and great importance, copiously supplied with cerebro-spinal fibres, and are acutely sensitive to a blow. On the other hand, the homologous female organs, the ovaries, being fully protected within the body, have none but sympathetic nerves; while the female mammary glands, which are exposed, have numerous cerebro-spinal fibres, and are as acutely sensitive as the testes: whereas, on the contrary, the functionless male mammae are as comparatively insensitive as the rest of the chest. In these two pairs of crucial instances we have the antithesis presented in its fullest form.

Until very lately, I was inclined to suppose that *only* the cerebro-spinal system had anything to do with our pleasures and pains, and that the so-called sympathetic was a mere insentient mechanism for the regulation of secreting glands and other automatic organs. But a short time since a book under the title of *Man's Moral Nature*, by Dr. R. M. Bucke, medical superintendent of a lunatic asylum at London, Canada, happened to fall into my hands.<sup>1</sup> This work is one of those essays whose vague generalities inspire the reader with caution and suspicion, at the same time that they are rich in suggestive ideas. With Dr. Bucke's main proposition—that our "moral nature" (whatever that may mean) is connected with the sympathetic system—I cannot at all agree; nor do I think that he has himself formed a very clear conception of what the phrase "moral nature" denotes in his mouth. But his book, which is well worth reading for its curious side-hints, certainly leads a critical reader to doubt whether the sympathetic system may not have much to do with our emotional pleasures and pains, and with that vague, half-unconscious background of feeling which has often quite as great an influence on our general happiness or misery as any definite bodily enjoyments or discomforts. Without appropriating all Dr. Bucke's ideas, I may just note, after him, that women are more emotional than men, and that this vague background seems to have much greater importance as an element of consciousness in their sex than in ours, especially in certain phases of their life; while it is clear that the main difference between the two nervous systems consists in the fact that their cerebral system is relatively poorer and their sympathetic system relatively richer than ours, since the great organs in which they differ from us are mainly supplied with sympathetic fibres. Again, such emotional states are strongest with them just at the period of full functional activity in these organs. So, too, in

<sup>1</sup> For a short notice of this book, see MIND XVII., p. 151.

children emotion is more pronounced than in adults, and here in like manner the sympathetic is relatively richer than the cerebro-spinal system. From these and various other considerations (for which I must refer the reader to Dr. Bucke), it may, perhaps, be inferred, not quite illegitimately, that the sympathetic system has a considerable unspecialised implication with our total emotional condition. If so, it might, by the general sense of restlessness or content which it induced, react upon the voluntary muscular system, and it might also have a large share in producing those actions whereby conjugal or parental affection is utilised for the continuance of the various species.

Be this as it may, it will now be clear, I think, why Mr. Sully's objection respecting the painlessness of many internal diseases has little real weight; for such diseases are really those of glands supplied with few but sympathetic fibres.<sup>1</sup> Yet the distribution of the two classes of nerves is so intricate, and the enveloping coats of most insentient organs are themselves so fully innervated with sentient fibres, that internal diseases present the greatest apparent capriciousness as regards their painful or painless character. We should always remember, however, that no animal but man could derive any possible advantage from feeling an internal pain, as it could not intelligently apply a fitting remedy; and even with man it may be doubted whether medical science has ever done much real good until the last few hundred years. Hence, the true difficulty is to account for the occasional *painfulness* of internal diseases, not for their frequent painlessness. Why should internal muscles or membranes *ever* be supplied with pain-yielding fibres? To this question I believe we can only answer that the cerebro-spinal system is, as it were, constructed on the same plan throughout. A certain number of fibres are distributed pretty generally through all the tissues which it innervates; and though in some highly vulnerable places special collections of pleasure-and-pain-yielding fibres are specially grouped together for a special purpose, as in the tongue, the teeth, and the dermis, yet in all other places a fair number of such fibres are pretty equally distributed, so long as there is no absolute reason to the contrary. Nerves of sentience in the hair or epidermis would be a positive nuisance to man or beast, and therefore they do not occur—for it is desirable that locomotive animals should be externally coated with a protective insentient envelope having no function save that of protection; but in the peritoneum sentient nerves are as a rule neither use-

<sup>1</sup> It may be worth while to remark, in connexion with the views suggested by Dr. Bucke, that though lesions of these organs are often painless, so far as acute or definite pain is concerned, they are very generally accompanied by fretfulness or other vague emotional disturbances.

ful nor hurtful, and therefore the organism does not, so to speak, take any special trouble to dispense with them. In short, pains in internal organs are due, not to a special provision of nerves for the purpose, but to the general sensibility of all afferent cerebro-spinal fibres to disintegrative action.

These stray notes, being really a bundle of after-thoughts, are necessarily somewhat discursive and lacking in form; but I trust the reader will forgive that defect, if they contain anything that is new or suggestive in matter.

GRANT ALLEN.

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#### IV.—MR. SPENCER'S ETHICAL SYSTEM.

THE aim of Mr. Herbert Spencer's recently published book on the *Data of Ethics* is, as the author tells us in his preface, "the establishment of rules of right conduct on a scientific basis". And though the volume itself is not a complete treatise on the subject to which it relates—being, in fact, only the first division of such a treatise—it claims to imply the specific conclusions to be set forth in the entire work "in such wise that definitely to formulate them requires nothing beyond logical deduction". We may take it therefore as containing in outline Mr. Spencer's ethical system; and it has all the more interest, as the exposition of this system is regarded by the author as the culmination of his Synthetic Philosophy, the "part of his task to which all preceding parts are subsidiary". The influence of a book, so prefaced, on the numerous disciples of this Synthetic Philosophy will undoubtedly be great; and as it is to be hoped that Mr. Spencer will find time to complete the work of which this is an instalment, it seems opportune to examine one or two fundamental points in his system, on which, as it appears to me, some further explanation or justification is required. In performing this examination, I shall find it most convenient not to follow closely the order of Mr. Spencer's exposition; but rather to ask, in what seems to me their natural sequence, the chief questions to which every ethical system has to supply an answer, and then to ascertain—by a comparison, if necessary, of different chapters—how these questions are answered by Mr. Spencer.

In the first place, we have to notice a certain ambiguity in the general notion of "establishing rules of conduct on a scientific basis"? Writers who discuss moral rules either from what Mr. Spencer calls "the evolution point of view," or in the earlier manner of the Associationist school, frequently mean by a "scientific" treatment of morality merely an investigation of

the laws according to which the ethical beliefs and sentiments of our own or any other society have come into existence. Such an investigation is obviously a legitimate branch of Sociology or Psychology ; and those chapters (cc. vii. and viii.) of Mr. Spencer's book which treat of the "Psychological View" and the "Sociological View" seem to be largely concerned with speculations of this kind. So far as this is the case, I do not propose to criticise either the method or the conclusions of these chapters ; what I wish to point out is that this species of inquiry, however successfully conducted, has not necessarily any tendency to "establish" the *authority* of the morality of which it explains the existence. More often, I think, it has an effect of the opposite kind ; the "law so analysed," as Bishop Blongram says, is felt after the analysis not to "coerce us much". A scientific explanation of current morality which shall also be an "establishment" of it, must do more than exhibit the causes of existing ethical beliefs ; it must show that these causes have operated in such a way as to make these beliefs true. Now this Mr. Spencer certainly does not attempt ; for the sufficient reason that he does not admit the final authority of existing ethical beliefs. In the chapters which contain (*inter alia*) his account of the origin of current moral conceptions he is continually criticising them as "defective," "one-sided," "vitiated," destined to give way to a "truer ethics". In short it is this "truer ethics"—Mr. Spencer's morality, not the current morality—which it is his ultimate aim to "establish".

In what way then does Science—that is, Biology, Psychology, and Sociology—provide a basis for this "truer ethics". Mr. Spencer's answer seems to be that these sciences show us, in the first place, a supreme or ultimate end, to the realisation of which human actions are universally or normally directed ; and that they enable us, in the second place, to determine the kind of conduct by which this end may be attained in the highest possible degree. Let us begin with the establishment of the end. Mr. Spencer seems to be leading us to this in his two first chapters ; in which he considers the conduct to which ethics relates, that is, the voluntary actions of human beings, commonly judged to be right and wrong, as a portion of "universal conduct—conduct as exhibited by all living creatures". He defines conduct, in this wider sense, as the "adjustment of acts to ends" ; acts being more precisely defined as external motions of animate beings. He points out how the conduct of the lower animals as compared with the higher, in a scale ascending up to civilised man, "mainly differs in this, that the adjustment of acts to ends are relatively simple and relatively incomplete". What, then, in the case of these lower forms of life, are we to

regard as the ultimate end, to which the special ends of catching food, avoiding foes, &c., are subordinate? Mr. Spencer unhesitatingly says that the "general" or "supreme" end of the adjustments which constitute life is the continuance and further development of these adjustments themselves. Life, in short, is for life's sake; only we are instructed not to measure life merely by its length, but by what is called its "breadth" also; that is, we must take into account the different "quantities of change" that different living beings pass through in the same period of time. We have also, of course, to bear in mind that the actions of any individual may be partly adjusted to the initiation, prolongation and enlargement of other lives besides its own; and we observe that this is to a continually greater extent the case, as we ascend in the scale of living beings. Still, notwithstanding this doubleness of measurement and this complexity of adjustment, "quantity of life" none the less remains the ultimate end of "universal conduct"; and we naturally expect that, when we pass to consider the particular part of this conduct to which ethics relates, this same end will be taken as the final standard for judging actions as right and wrong: especially since, even in speaking of the lower animals, Mr. Spencer does not hesitate to describe actions that fail to sustain life as "conduct falling short of its ideal".<sup>1</sup> And in fact, when he comes to treat of human actions, Mr. Spencer does argue that we commonly regard conduct as good in proportion as it conduces to "the greatest totality of life in self, in offspring, and in fellow-men". But he does not accept this view as final; on the contrary, he is concerned to point out that it involves "an assumption of extreme significance". It is assumed that life "brings a surplus of agreeable feeling"; and this he emphatically declares to be the only possible justification for maintaining it, or for judging conduct to be good that conduces to its preservation. The Ethical End, therefore, in relation to which moral rules are to be established, turns out to be not merely quantity of life, "estimated by multiplying its length into its breadth," but quantity of agreeable feeling, pleasure or happiness.<sup>2</sup>

Now, after all that has been said of the importance of considering human conduct in connexion with the "universal

<sup>1</sup> The frankly teleological point of view from which, in this book, Mr. Spencer contemplates the phenomena of Life generally, seems worthy of notice; since in his *Principles of Biology* he seems to have taken some pains to avoid "teleological implications". Cf. *Pr. of Bi.* c. v. p. 27.

<sup>2</sup> Mr. Spencer seems to use "pleasure" and "happiness"—or at least "quantity of pleasure" and "quantity of happiness"—as convertible terms. I should concur in this: but I think he is rather hasty in condemning Aristotle—who could not foresee how he would be translated into English—for not taking a precisely similar view of the relation of *εὐδαιμονία* to *ἡδονή*.

conduct" of which it is a part, I think that this transition from "quantity of life" which was stated to be the end of the latter to "quantity of pleasure" is too rapidly and lightly made. Pessimism, as Mr. Spencer himself says, stands in the way, declaring that life does not bring with it a surplus of agreeable feeling. We expect therefore a scientific confutation of Pessimism; and I am unable to perceive that this expectation is ever adequately realised. Indeed I am unable to find any passage in which Mr. Spencer expressly undertakes such a confutation. And yet he can hardly think that pessimism is sufficiently confuted by demonstrating that the common moral judgments of mankind imply the assumption that life, on the average, yields a surplus of pleasure over pain. This is not establishing morality on a scientific basis; such an appeal to common sense merely indicates the *pis aller*, the provisional support, with which moralists have to content themselves when they cannot provide a scientific basis for their doctrines.

From a comparison of different passages<sup>1</sup> I am inclined to think that, in Mr. Spencer's view, pessimism is indirectly confuted by the argument—given as an "inevitable deduction from the hypothesis of evolution"—which shows that "necessarily throughout the animate world at large, pains are the correlatives of actions injurious to the organism, while pleasures are the correlatives of actions conducive to its welfare". But, granting this connexion to be established, I do not see how we can strictly infer from it that life on the whole is pleasurable rather than painful. It seems to me that we can only infer that actions preservative of the individual or the race will be generally speaking less painful than those which have an opposite tendency; and that the pains normally endured will not be sufficiently intense to destroy life. The connexion, in fact, leaves nature a choice of alternative methods in her business of adjusting the actions of living beings to the preservation and continuance of life; she may either attract them in the required direction by pleasure, or deter them from divergent courses by pain: it is undeniable that, hitherto at least, her plan of management has combined the two modes of guidance, and I do not see how the proportion in which the two methods are actually mixed can be ascertained by *a priori* inference. Still less do I see how Mr. Spencer is justified in assuming that conduct tending to make "the lives of each and all the greatest possible, alike in length and breadth" is simply identical with conduct of which the "ultimate moral aim" is "gratification, enjoyment, happiness". I think that we may fairly ask him, in any future

<sup>1</sup> Cf. pp. 33, 56, 63, 67 among others.

instalment of the present treatise, to give us something more like a proof of the Optimism which is so essential a feature in his ethical construction.

Meanwhile, let us suppose that Pleasure or Happiness has been established—scientifically or otherwise—as the ethical end. Before we come to consider the appropriate means for the realisation of this end, one fundamentally important point remains to be settled, *viz.*, whose pleasure we have in view. Is the ultimate aim of Mr. Spencer's Ethics to make pleasure of happiness in general a maximum? or is it rather to advise the individual human being how to gain the greatest possible amount of happiness for himself? Of course these two ends will be to a great extent attained by the same means; and many utilitarians have held that this is altogether the case, and that it is impossible for any individual to attain his own happiness in the greatest possible degree by any conduct other than that which is most conducive to the aggregate happiness of all whom his conduct affects. But in any case the extent to which Egoistic Hedonism and Universalistic Hedonism<sup>1</sup> practically coincide will have to be carefully investigated in a scientific exposition of either system: we have first to settle whether we take the happiness of the individual or happiness generally as the *ultimate* end; and then when our choice is made, there arises a second and quite distinct question in either case—*viz.*, how far this ultimate end will be best attained indirectly by taking the other end as the direct object of pursuit. Now I cannot but think that Mr. Spencer has somewhat confounded these two questions in the chapters (cc. xi.-xiv.) in which he first discusses the claims of "Egoism" and "Altruism," and then proposes a "Compromise" between the two, and an ultimate "Conciliation". For instance, in arguing the case of "Egoism *versus* Altruism," he appears to assume general happiness as an ultimate end, a final criterion by the application of which we are to determine the limits of Egoism as a subordinate practical principle; his contention seems to be merely (to use his own words) that the "pursuit of individual happiness within those limits prescribed by social conditions is the final requisite to the attainment of the greatest general happiness," and that in various ways "diminutions of general happiness are produced by inadequate egoism". On the other hand, in c. xiii., he expressly attacks Bentham and his followers for holding that general happiness should be the ultimate end and final standard of right conduct; and refuses to admit "that from the stand-point of pure reason, the happiness

<sup>1</sup> I venture to adopt my own nomenclature—to which Mr. Spencer does not seem to have any objection.

of others has no less a claim as an object of pursuit for each than personal happiness". But he seems to treat this position as identical with the "theory which makes general happiness the sole [or almost the sole] *immediate* object of pursuit"; a theory very remote from Bentham's—whose practical view was characteristically expressed in the sentence that "self-regard alone will serve for diet, though sympathy is very good for dessert"—and not maintained, so far as I am aware, by any of his leading disciples. And it is only against this latter doctrine, which he more frequently and more properly designates as "pure altruism," that Mr. Spencer's arguments are in any way effective; the issue (as he himself states it) is whether "equitable egoism" or "pure altruism" will produce the "greatest sum of happiness" on the whole; and his conclusion is that "general happiness is to be achieved mainly through the adequate pursuit of their own happiness by individuals"—which, as I have just said, was precisely Bentham's conclusion. I think therefore that Mr. Spencer's apparent antagonism to the Utilitarian school, so far as the ultimate end and standard of morality is concerned, depends on a mere misunderstanding; and that in all this part of his treatise his quarrel is not really with the very sober and guarded "altruism" of Bentham and the Benthamites, but with certain hard sayings of the prophet of the Positivist religion, from whom the term *Altruism* is taken.

Provisionally, then, I shall conclude that in Mr. Spencer's Ethics the ultimate criterion used in establishing rules of Conduct is Happiness or Pleasure, taken generally.<sup>1</sup> Let us now

<sup>1</sup> I do not wish here to put prominently forward the difficulties that I find in working with the notion of a "sum of pleasures"—difficulties which I have explained at sufficient length in my *Methods of Ethics* (Book II. c. iii.). But since Mr. Spencer has referred (in c. ix.) to this part of my treatise, I may perhaps observe that he has not altogether apprehended the scope of my argument. I did not merely urge that in many cases when we try to compare two different pleasures (or pains) we are unable to ascertain which of the two is the greatest. The answer, that we ought to choose the greatest surplus of pleasure *so far as we can ascertain it*, is sufficiently obvious, and if I had meant no more than what can be thus answered, I should not have dwelt so long on the point. But I thought it important to point out further that the very notion of a 'sum of pleasures' implies that the pleasures spoken of are capable of being summed; that is, that they are things quantitatively determinate in respect of their quality as pleasures; and that this assumption, however natural and even irresistible it may be, certainly lacks empirical verification.

I must just add that Mr. Spencer's argument on this point suggests that I am not aware that the objections urged by me against the Hedonistic method apply with even greater force to Universalistic, than they do to Egoistic Hedonism. I certainly thought that I had stated this in the clearest possible language. (Cf. *Meth. of Eth.* B. IV., c. iv., § 1.)

pass to consider his method of scientifically determining the rules themselves.

The apprehension of this method is rendered, I think, more difficult for the reader by the fact that a definite statement of it is given for the first time in the two concluding chapters of the treatise. It is true that the general nature of it has been gradually elucidated in various earlier passages. For instance, its scientific claims are plainly declared in chapter v., on "Ways of judging Conduct"; from which we learn that Mr. Spencer's way of judging it is to be a high priori road. He will not rely on mere generalisation from observation of the actual consequences of different kinds of conduct; it is the defect of current utilitarianism that it does not get beyond these merely empirical generalisations; Mr. Spencer, on the other hand, proposes to "ascertain necessary relations" between actions and their consequences, and so to "deduce from fundamental principles what conduct *must* be detrimental and what conduct *must* be beneficial". Those are brave words, and they will perhaps raise the reader's hopes to the pitch of expecting to find this demonstrated morality in the four chapters that follow, giving respectively the Physical, Biological, Psychological, and Sociological views of conduct. If so, I fear he will be disappointed to learn (c. vi., § 31) that he is to "avoid the tendency" to judge Mr. Spencer's conclusions "by their applicability to humanity as now existing"; and he will be perplexed as to the extent to which he is to avoid this tendency; since a good deal of the discussions in this and the two following chapters plainly relate to human beings that actually exist or have existed. I certainly think that Mr. Spencer ought to draw a clearer line between the actual and the ideal in this part of his treatise; until this is done, it seems to me difficult to criticise these reasonings closely, though they contain much that suggests criticism.

In the concluding chapters, however, these perplexities are cleared away. It is there made quite plain that the rules of conduct, of which Mr. Spencer undertakes to provide a deductive science, are rules that "formulate normal conduct in an ideal society": a society so ideal that in it such conduct will "produce pure pleasure—pleasure unalloyed with pain anywhere". Indeed, in his view, it is only conduct of which the effects are thus unmixed that can be called "absolutely right"; "conduct that has any concomitant of pain, or any painful consequence, is partially wrong". Ethical science, then, is primarily "a system of ideal truths expressing the absolutely right"; and we are to note that it is only this "Absolute Ethics" of which the method rises above the merely empirical procedure, previously condemned as defective; for "Relative Ethics," which has to deal

with all practical questions as to what we ought to do here and now, is "necessarily empirical" in its judgments—at least in all cases that present any difficulty.

The questions then arise (1) How far are we able to form a sufficiently definite conception of the constitution of Mr. Spencer's ideal society to enable us to frame a system of rules for it? and (2) How much guidance would such a system give us in solving the problems of conduct presented by our actual conditions of social life? I have argued against Mr. Spencer's view on these points, in a brief and general way, in my book on the *Methods of Ethics* (B. I., c. ii., § 2). I refer to this passage because Mr. Spencer has replied to me at some length in the present work (c. xv., § 105); but has unfortunately omitted to answer my arguments, owing to a misapprehension which I must now explain. My reasoning was not addressed directly to such a statement of the relation of Absolute and Relative Ethics as I have above endeavoured to abridge from the two last chapters of the treatise before us; what I tried to combat was the far more paradoxical doctrine on the same subject which I found in Mr. Spencer's *Social Statics*. It was there maintained not merely that Absolute Ethics ought to "take precedence of Relative Ethics"; but that Absolute Ethics was the only kind of Ethics with which a philosophical moralist could possibly concern himself. To quote Mr. Spencer's words:—

"The moral law must be the law of the perfect man . . . any proposed system of morals which recognises existing defects, and countenances acts made needful by them, stands self-condemned. . . . Moral law . . . requires as its postulate that human beings be perfect. The philosophical moralist treats solely of the *straight man*. . . . a problem in which a *crooked man* forms one of the elements, is insoluble by him" (c. i.).

Still more definitely is Relative Ethics excluded in the concluding chapter of the same treatise:—

"It will very likely be urged that, whereas the perfect moral code is confessedly beyond the fulfilment of imperfect men, some other code is needful for our present guidance . . . to say that the imperfect man requires a moral code which recognises his imperfection and allows for it, *seems at first sight reasonable*. *But it is not really so*<sup>2</sup>. . . . a system of morals which shall recognise man's present imperfections and allow for them *cannot be devised*; and would be *useless if it could be devised*."

I observe that Mr. Spencer, in replying to me, refers to his *Social Statics*, as though he still held the opinions there expressed; but I must confess that I cannot reconcile these passages, and others that might be quoted from the same context, with the view of Relative Ethics given in the concluding chapters of the present treatise. At any rate, it was in opposition to this earlier view and not to the later one that I thought

<sup>2</sup> The italics are mine.

it fair to adduce the analogy of astronomy, and to suggest the absurdity of a 'philosophical astronomer' declining to deal with any planets that did not move in perfect ellipses. Mr. Spencer, in his rejoinder, takes the suggested analogy to relate to the question whether the study of Absolute Ethics should precede that of Relative Ethics. Had this been my meaning, the reference to astronomy would have been manifestly inappropriate. But in fact it was only in the paragraph succeeding that to which Mr. Spencer has replied that I began to discuss this latter question, as is evident from the following sentences with which my second paragraph opens:—

This inquiry into the morality of an ideal society can therefore be at best but a preliminary investigation, after which the step from the ideal to the actual remains to be taken. We have to ask, then, how far such a preliminary construction seems desirable.

After which I proceed to state my objections to that more moderate view of the claims of Absolute Ethics which is expounded in the treatise before us. These objections Mr. Spencer has not noticed: in fact his interest in my argument seems to have ceased exactly at the point at which it began to be really relevant to his present position. My criticisms, no doubt were tolerably obvious; but as they still appear to me substantially valid, I have nothing to do but to re-state them briefly, with such variations as his present treatise suggests.

In the first place, granting—a large grant—that Mr. Spencer's ideal society, in which the voluntary actions of all the members cause "pleasure unalloyed by pain anywhere" to all who are affected by them, is one which we can conceive as possible, it seems to me quite impossible to ascertain *a priori* the nature of the human beings comprising such a society with sufficient definiteness and certainty to enable us to determine their code of conduct. It has not come within Mr. Spencer's plan to delineate this code in the present treatise, otherwise than in the scantiest and most general way; but among the meagre generalities that he has given us, I can find nothing that is in any degree important which is not also in a high degree disputable. The most important is undoubtedly the formula of Absolute Justice as the fundamental principle for regulating social co-operation. Of this Mr. Spencer, in the concluding chapter, gives the following statement:—

"Individual life is possible only on condition that each organ is paid for its action by an equivalent of blood, while the organism as a whole obtains from the environment assimilable matters that compensate for its efforts; and the mutual dependence of parts in the social organism necessitates that, alike for its total life and the lives of its units, there similarly shall be maintained a due proportion between returns and labours: the natural relation between work and welfare shall be preserved intact . . .

That principle of equivalence which meets us when we seek its roots in the laws of individual life, involves the idea of *measure*; and on passing to social life, the same principle introduces us to the conception of *equity* or *equalness*, in the relation of citizens to one another; the elements of the questions arising are *quantitative*, and hence the solutions assume a more scientific form."

Here, in speaking of a "due proportion between returns and labours," Mr. Spencer does not mean merely—as the analogy of the individual organism might lead us to suppose—that each labourer will receive the means of carrying on his labour in the most efficient manner; his meaning is, as several other passages show, that he will receive a share of wealth proportioned to the value of his labour. But so far as this share is more than our ideal labourer needs for labouring efficiently, I see no ground for affirming *a priori* that he will receive it, since it is quite conceivable that the surplus would produce more happiness if distributed among other ideal persons. To this Mr. Spencer would probably answer (*Cf. c. xi., § 69*) that unless "superiority profits by the rewards of superiority" the struggle for existence, to which "the progress of organisation and the reaching of a higher life" have hitherto been due, can no longer continue. This is doubtless a weighty consideration in dealing with the practical problems of existing societies; but I cannot admit its relevancy in "Absolute Ethics," until it is shown how we are to get the advantages of the struggle for existence without their attendant disadvantages, that is, without some pain to those who are defeated in the struggle; for all such pain is *ex hypothesi* excluded from Mr. Spencer's ideal society, in which all voluntary actions produce unalloyed pleasure. Again, I cannot see any validity in the conception of "equalness," as governing the relations of ideal citizens, except so far as it means merely that similar persons will be treated similarly; for we cannot know *a priori* how far our ideal citizens will be dissimilar, and therefore reasonably subjected to dissimilar treatment. The progress of Evolution, Mr. Spencer elsewhere tells us, is to increase heterogeneity; though he nowhere attempts to define the degree of heterogeneity which the ideal society will exhibit. This point is very important in reference to a further question that Mr. Spencer indicates—as to the legitimate ends and limits of government authority. I cannot conceive how this question is to be definitely answered, unless we know in what varying degrees political wisdom is distributed among our more or less heterogeneous ideal citizens; and how can we precisely know this *a priori*?

In short, it seems to me that the imagination which Mr. Spencer has exercised in constructing his ideal society has none of the characteristics of a really scientific imagination; he has

not succeeded in leading us logically to a precise and consistent conception of the mutual relations of the members of this society.

But, secondly, even if it were otherwise—even if we could construct scientifically Mr. Spencer's ideal code, I do not think such a code would be of much avail in solving the practical problems of actual humanity. For a society in which—to take one point only—there is no such thing as punishment, is necessarily a society with its essential structure so unlike our own, that it would be idle to attempt any close imitation of its rules of behaviour. It might possibly be best for us to conform approximately to some of these rules; but this we could only know by examining each particular rule in detail; we could not know it generally and *a priori*. We cannot even affirm that it would be best for us to approximate to it as far as is practicable. For even supposing that this ideal society is ultimately to be realised, it must at any rate be separated from us by a considerable interval of evolution; hence it is not unlikely that the best way of progressing towards it is some other than the apparently directest way, and that we shall reach it more easily if we begin by moving away from it. Whether this is so or not, and to what extent, can only be known by carefully examining the effects of conduct on actual human beings, and inferring their probable effects on the human beings whom we may expect to exist in the proximate future; that is, by the humble and imperfect empirical method which Mr. Spencer may be right in despising, but for which he has not yet provided an efficient substitute.

HENRY SIDGWICK.

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#### V.—DR. WARD ON FREE-WILL.<sup>1</sup>

THERE are in philosophy two well-defined modes or currents of thinking, which give their colour to every doctrine which may be propounded, and mark it with an opposite stamp. One is the striving after analysis, which, applied to subjective phenomena—as it must be applied in philosophy—issues in *meta-*

<sup>1</sup> Articles from the *Dublin Review*: I. April, 1874, "Mr. Mill's Denial of Free-will"; II. July, 1874, "Appendix to Article on Free-will"; III. July, 1876, "Mr. Mill on Causation"; IV. April, 1879, "Free-will." [This article, which could not appear earlier, was written about the same time as Prof. Bain's Note on the subject printed in the last number of *MIND*. Dr. Ward, though aware that Mr. Hodgson's article was to follow, preferred to reply separately to Prof. Bain—in the Note to be found on some later pages of the present number.—ED.]

*physic*; the other is the search for some concrete truth or truths of self-evident certainty, from which, when applied to phenomena, a system of minor truths may be deduced, which is the method of *empiricism*. Persons dominated by these opposite tendencies rarely understand each other, for want of perceiving the opposition in the tendency which is latent, while they perceive clearly enough the difference in the results which is patent. And those again who belong to the same tendency, but who are opposed on points of great importance, often misunderstand each other's position for a similar reason, because they do not perceive the sameness of the latent tendency which they have in common.

There is no difference in the method of philosophising more deeply seated or more influential than this. The two tendencies govern the whole field of thought, and the two tendencies are at war. The question is, which of the two is the legitimate master-principle in philosophy—analysis, or deduction from supposed self-evident truths? I say master-principle, because it by no means follows that the victory of either would involve the abolition of the other; it would involve only its subordination, its removal to a subsidiary office. At the same time, it must be allowed that if the empirical principle were the one to yield, its subordination would involve in some cases a change in the character of the truths which it propounds—namely, where it propounds them as of *absolute* authority.

Tried by this test, confronted by this distinction of fundamental tendencies, the most pronounced opposites must often shift places and stand shoulder to shoulder. *Phenomenist* and *Intuitionist* are no longer such utter irreconcilables as they seem, but sometimes have a deeper union in common—namely, in those cases where they both belong to the empirical tendency. Mill and Dr. Ward may shake hands there. Both are empiricists, but the entities of the one are objects of sensible experience, those of the other of supra-sensible intuition. The disciple of Mill denies the self-evidence of phenomena given by intuition, and appeals to phenomena given by experience; but this is not the same thing as appealing to *analysis*; that is, to analysis of both kinds of phenomena alike. Some concrete, unanalysed, experience is what the disciple of Mill seeks as a basis on which to rear his system. And this method, which is doubtless the true method in science, the intuitionist extends to philosophy, while phenomenists of the Mill school deny the supposed experience of the intuitionist, his necessary intuitive truths, in the introspective domain. Between them there is a difference as to facts, but none as to method. On the other hand, there are some phenomenists who would come very near

indeed to Dr. Ward's intuitionism in results, though in method divergent as the poles.

But of all this Dr. Ward betrays not the smallest inkling. To him phenomenism is the fundamental antithesis of intuitionism, as darkness of light, or evil of good. It never occurs to him that there are phenomenists and phenomenists; nor even, what is stranger, that there are intuitionists and intuitionists. He proceeds in the good old way to demonstrate the existence of God, as if Spinoza had not long ago exhausted the possibilities of the ontologico-empirical method in that direction. In the presence of phenomenism and Mill, a re-statement of the scholastic demonstration of God's existence becomes, he thinks, the most pressing need of the time (April, 1879, p. 1).

Of this demonstration those articles from the *Dublin Review* which contain the demonstration of Free-will, and which are those named at the head of this paper, are intended to form a part. Reprints of these articles are now before me, sent me by the kind courtesy of the author. In return for which, I now propose, what I am sure he will approve, to break a friendly lance with the fair-minded author, by doing my best to show that not a stick or stone of the demonstration will hold together when brought to the test of analysis. What Dr. Ward will probably not believe is, that I see no difference in essentials—that is, as a matter of practical belief influencing conduct, between his view of Free-will and my own. That the law of liberty is the highest law there is, *Libertas supra lex*, has long been a favourite saying of mine. But I do not on that account oppose liberty antithetically to necessity. There is an inner necessity of a man's nature, as well as an external necessity acting upon him from his environment; and the action of that inner necessity is his liberty. Liberty is a mode of necessity, and its true name is *self-determination*. Dr. Ward's demonstration may fall away, yet leave *this* liberty intact; and *this* liberty it is which, describe it as we may, theorise about it as we will, is the one common kernel of the matter, held by us both alike.

But why do I say that Dr. Ward will probably not believe this? Because to believe it on both sides would be to put an end, *pro tanto*, to the controversy. Both would then see that they were contending only *nominally* about free-will, but *really* about something very different. If the practical freedom of man, his power of self-determination with its corollaries—namely, his moral responsibility and the moral government of the world—were admitted to be as much consequences of determinism as of indeterminism, the free-will controversy would appear in its true shape and colours. That controversy is now kept alive on false suppositions. The real subject of dispute is

not whether man is a free agent, but what school of thought shall have the credit of best assuring the doctrine that he is so. Not the catholic truth of free-will, but the truth about free-will as held by the Catholics, is the subject of dispute. Now the truth about free-will as held by the Catholics is what I venture to think is no truth at all, and what Dr. Ward has devoted the articles before us to demonstrate.

In fact, the phrase *freedom of the will* is ambiguous, and covers two very different doctrines. As it is commonly understood by controversialists, and by Dr. Ward among others, it means that the will is free with a freedom antithetically, or with mutual exclusion, opposed to necessity; some acts being entirely free without admixture of necessity, and others entirely necessitated without admixture of freedom. This *separation* of freedom and necessity is empirical, cannot be intelligibly construed to thought, and therefore renders the freedom of the will unthinkable and illusory. So far from freedom and necessity being properties attached, one to this act, one to that, they are *characters*, both of which attach to every free act according to the point of view from which you regard it. Accordingly, in the other and true sense of the phrase *freedom of the will*, freedom means the action and re-action of motives on each other within the mind, not fettered by external constraint, but free to exert each its own kind and degree of energy. This exertion is freedom; and thus a free act of the mind is one which is wholly necessitated when you look at its *factors*, and wholly free when you look at their *action*; while from the point of view of the agent, the act is one of self-determination. Since this is the only way in which freedom can be intelligibly construed to thought, it follows that those who oppose the doctrine of freedom, as it is commonly and empirically understood by controversialists, are the firmest upholders of the freedom of the will in its intelligible, real, and practical significance; which is also the sense in which it is understood by mankind at large.

## I.

The doctrine of Free-will according to Dr. Ward consists of two branches, the first being the doctrine of Indeterminism, the second a doctrine of the Causation of human acts. The first he calls a psychological, the second a metaphysical doctrine (April, 1874, pp. 2, 22; April, 1879, p. 30). The first is treated at length in the article of April, 1874, and the Appendix, July, 1874. The second is treated in the article on "Causation," July, 1876. And the final article on "Free-will," April, 1879,

sums up the results of both. In July, 1876, p. 8, Dr. Ward thus expounds his position:—

"The establishment of this truth" [of Free-will] "against phenomenists required the establishment of two conclusions, one psychological and the other metaphysical. Phenomenists allege as a matter of experience (to use Mr. Mill's words) that 'volitions follow determinate moral antecedents with the same uniformity and the same certainty as physical effects follow their physical cause'. This is the tenet of determinism. We argued against it in April, 1874; and supplemented our reasoning by some further remarks in our following number. We called our own adverse position by the name 'indeterminism'; being the purely negative position, that volitions are *not* certainly determined by psychical antecedents. But free-will includes another doctrine besides that of indeterminism; it includes the doctrine that man is a self-determining cause of volition. And this proposition of course cannot be treated until we have considered the question of causation."

These then being the lines laid down by Dr. Ward for the treatment of the whole question, upon these I will now follow him, premising however that I by no means adopt his use of the term *metaphysical*, where I should say *psychological*, or (in case of Dr. Ward's theory being proved) *ontological*. But apart from this, nothing can be clearer or more convenient than the division which he has adopted. First comes the psychological question (as he calls it) of *fact*. Is "the will's course of action infallibly and inevitably determined at every moment by the circumstances—(1) internal (2) external—of that moment" ? (April, 1879, p. 30. See also April, 1874, p. 10, note; and July, 1874, p. 14.) Secondly, if this is not the fact, what is the determinant of the will's course in those cases where it is not determined either by circumstances within or by circumstances without the agent; or, in Dr. Ward's phrase, what is "the proximate cause of free acts of the will" ? (April, 1879, p. 36.)

Though Dr. Ward calls his first position a purely negative one, in the sense of its being negative of Determinism (April, 1879, p. 30), the facts which he alleges are positive enough: "the Determinist's theory is, that no man resists his strongest present impulse; and his theory therefore is conclusively and finally refuted, if it be shown that any one man—and much more if it be shown that a large class of men—do often resist their strongest present impulse" (April, 1879, p. 22). Nothing can be more positive, and, as he declares, more aggressive, than his whole line of argument (*ib.*, p. 17). He brings a long array of well chosen cases to prove, no negative point, but a positive fact, that the course of the will's action is often in opposition to the man's strongest present impulse. He rests his whole case, in the first branch of his argument, upon his proof of this fact. The whole deterministic controversy, he says, turns on one question, "which is simply and precisely this: Do men ever resist a real desire? Is there such a thing as self-restraint?"

"To answer it in the affirmative is to reject determinism in every possible shape" (July, 1874, p. 13; and again, quoting the former passage, April, 1879, p. 12).

Now, when one hears that the whole deterministic controversy turns on the question whether there is or is not such a thing as self-restraint, one begins to suspect that some egregious misunderstanding of the terms employed, on one side or on the other, must be mixed up in the matter. Do Dr. Ward's elaborately stated cases come to this, that the exercise of self-restraint is a fact? Yes, to this and nothing else. For instance, one of his most striking cases is that of a young man who has been warned by his dentist to brush his teeth carefully every morning. But one day he is in a great hurry to get his breakfast over and go out hunting. He is on the point of disregarding the dentist's advice; "nevertheless—to use an equestrian simile such as he would himself love—he pulls himself up, and reins himself in; he dwells on the thoughts which are so clearly and distinctly in his mind, until they become vivid, and the balance of attraction is changed to the opposite side. *Determinists say that such a case as this never happens; that the laws of human nature forbid it.* Will any candid enquirer on reflection endorse their dictum?" (April, 1874, p. 14.)

The italics are mine. Easy indeed would be the refutation of determinism, if it were refuted by the existence of so simple a case as this. I therefore look, in the first place, for some misunderstanding, on one side or the other, of the terms in which it is stated; and it seems to be this. In the words "*he dwells on the thoughts*," Dr. Ward, I imagine, emphasises the italicised words, so as to mark that the movement of thought *originates with him*. Determinists would read them without emphasis, as a true description of *what takes place in his consciousness* at the moment of the turning of the balance from hunting to tooth-brushing. There are two attractions, hunting and tooth-brushing, soliciting his attention with varying degrees of energy, and at a certain moment one of these begins decisively to preponderate. What Dr. Ward must, I think, mean then by saying that determinists deny the possibility of such a case is, that they deny what he understands, his *subauditur*, in the words "*he dwells on the thought*," namely, the agent's origination of the decision—or, as he might say, deny that the restraint is *self-restraint*.

But even with this explanation we are not at the end of the disagreement. It is *self-restraint* as much on their reading of the words as on his. The whole balancing and decision takes place in the agent's consciousness, and therefore the decision is *his* decision, and the restraint *self-restraint*. The agent is soli-

cited by opposite attractions, the decision depends on his state of mind, his *internal* circumstances re-acting on the opposing attractions, the *external* circumstances. The thought of the dignity of keeping to a good resolution is, we may imagine, the particular internal circumstance which re-enforces the external attraction of the future benefit to be derived from the otherwise irksome tooth-brushing.

This reading of the story in the determinist sense will not, however, satisfy the indeterminist. He requires a cause beyond the preponderance of one external attraction over another when aided by the attraction of some internal circumstance. He will say, perhaps, that internal circumstances, states of mind, and so on, are not the agent *himself*; and will ask farther what decides that such and such an internal circumstance shall come into play here and now, and with this or that precise degree of force? He will urge that, if the determinist's reading were true, we ought not to say "he dwells on the thought," but rather, "the thought dwells on him". The agent himself, he will conclude, cannot be ignored.

What has the determinist to say in reply? This, that his own way of reading the above description includes and fully expresses all the *facts* of the case, but that the indeterminist's reading of it introduces into the facts the notion of causation, and the assertion of a cause of the fact of decision, which is not an observed fact, but, if it exists, belongs to the second branch of the whole question of free-will, as distinguished by Dr. Ward himself. To emphasise the "*he dwells on the thought*" is to import into the facts as observed a supposed, but not observed, *cause* of the direction those facts are observed to take. The determinist denies, and the indeterminist asserts, that the "*he*," the agent himself *apart from his internal condition at the time*, is a fact observable in cases of free choice. "It is a matter of direct, unmistakable, clamorous consciousness, that during those periods" [of resistance to impulse] "it is my own soul and no external agency, which is putting forth active and sustained anti-impulsive effort" (April, 1879, p. 39). Here Dr. Ward lays claim to an immediate knowledge not only of the *facts* of choice, but of the *cause* governing the facts. To make his testimony as to what the facts are quite complete, he ought to have added to the words "my own soul and no external agency" the further words, *and no internal circumstance or state of my soul*; as otherwise he does not fully deny the determinist's statement that internal circumstances concur in the result.

Still it is clear that Dr. Ward claims to have an immediate knowledge of the agent, or soul, *per se*, in cases of conscious anti-impulsive effort, and claims it as an essential part of the facts of

which anti-impulsive effort consists. But the existence of *this* knowledge requires proof, and no proof has he supplied; indeed, he has not even distinguished the fact of which proof is required from the other facts which go to constitute an anti-impulsive effort in the cases which he describes. He huddles it up with those facts in describing them, and then at last emphasises it, as if it had been distinctly described, when he comes to account for their causation. Yet I should have thought it was almost a truism at the present day, that we have no direct knowledge or intuition of our soul *per se*, apart from the states of consciousness which we attribute to it, and which are the "internal circumstances" of the determinists. If, however, Dr. Ward thinks, as he plainly does, that we have such an immediate knowledge of the soul *per se*, it ought to have been expressly described in describing the cases of anti-impulsive effort in which the knowledge is obtained; and then it would have ranked (of course for what it was worth) among the *facts* of the case. As it is, it is only an hypothesis accounting for the facts, and one the value of which must be discussed, not now, but when we come to the second branch of the argument. The facts as Dr. Ward describes them, in all the cases of anti-impulsive effort which he gives, are perfectly compatible with determinism.

But before going farther, it will be best to state more explicitly what Dr. Ward's theory precisely is, what precisely he considers that his instances prove. And again, in order to do this, some very important differences in the use of terms must be mentioned, which Dr. Ward himself points out, and insists upon as requisite to the understanding of his theory.

Chief among these is the use of the term *motive*, which with Dr. Ward means, not as with determinists, and I believe usually, spring of action, felt attraction or aversion—but *resolve*; so that my resolve to follow a certain line of conduct is, according to him, my *motive* for doing a particular action; whereas motive usually means the pleasure or advantage I expect to get, the pain or disadvantage I expect to avoid, by doing that action. These Dr. Ward calls, not motives, but *attractions* positive or negative.

"We will adopt therefore the word 'attraction,' in a very similar sense to that which determinists express by the term 'motive'. We will call by the name of an 'attraction' every thought which proposes some pleasure, positive or negative, to be gained by some act or course of action; and we will call one attraction stronger than another, if the pleasure proposed by the former is apprehended as greater,—is more attractive at the moment,—than that proposed by the latter" (April, 1874, p. 8).

Accordingly by "ultimate motive" in a course of action, Dr. Ward means my "resolve of pursuing some absolute end or ends, with a view to obtaining which I begin and continue that

course of action. And what an 'ultimate motive' is in relation to an *absolute* end or ends, precisely that is an 'immediate' or 'intermediate' motive in relation to a *relative* end or ends" (April, 1874, p. 10). Here the end or ends desired would be called the *motives* by determinists, and not the resolve to pursue them.

I will not stop here to do more than point out how entirely destitute this use of the word *motive* for *resolve* leaves us, when we inquire how resolves themselves are formed. And yet everything may turn upon the answer to that question. According to the usage of determinists, all acts, including internal acts of resolve, spring from motives; according to that of indeterminists, resolves are the one kind of acts which cannot spring from motives, whatever else they may spring from. The term *motive*, in their use of it, ceases to be applicable to the *formation* of resolves, a process which their terminology leaves in its native obscurity.

In accordance with the foregoing explanation, the terms *desire*, *attraction*, and *pleasure*, are used by Dr. Ward in a far more restricted sense than by determinists. By determinists they are applied to ends or purposes of all kinds, as co-extensive with imagined good or *bonum* generally; but by Dr. Ward they are restricted to one kind of good, pleasure as opposed to virtue, *bonum delectabile* as opposed to *bonum honestum*. Yet *bona* belonging to either class may be the objects of resolves (April, 1874, p. 11). It would seem, then, that a good thing may be the object of a resolve, without having any attractive power on the will,—a psychological impossibility.

The next difference in terms is more important still, inasmuch as it is not merely a matter of terminology, but introduces, by giving a technical name to it, a new or at least peculiar distribution of the subject-matter; it is part of the analysis as well as of the nomenclature. I mean what Dr. Ward calls the "definite and decisive spontaneous impulse of the will"; by which he means the *resultant* direction of the will, the impulse resulting from the conflict of all the attractions in play at the time. How far Mill's or Professor Bain's language may have lent itself to the singularity of calling a *resultant* direction *spontaneous*, I will not stop to ask. Whatever is purely matter of terminology is comparatively unimportant. But that the phenomena of volition should be cut up and parcelled out by a phrase of this kind, as if the existence of a corresponding fact was matter of notoriety, is logically monstrous. The assumption of a fact is here involved in the invention of a phrase.

Dr. Ward is in fact assuming thereby that all the attractions, pleasures, or desires, all the *bona delectabilia* which the case may

admit of act together and at once, without admixture from any conflicting *bonum honestum*, and result in an impulse which is thus determined solely by the balance of pleasurableness. Then comes in, in some cases, the resistance of some *bonum honestum*, and by a *resolve* turns the balance the other way. Now this analysis of the facts in cases of volition is perfectly arbitrary. It recalls the wish of the Roman worthy, that all Romans had but one neck, that he might behead them at a blow. Facts, however, are too stubborn to dispose themselves so obligingly. The *bona honesta* as well as the *delectabilia* must logically be counted among the contributories to the resultant. Which is what the determinists mean by saying that the resultant is inevitably determined by the motives, motives meaning with them *all* the attractions; and that the "resolve of pursuing some absolute end," which is Dr. Ward's definition of an "ultimate motive," is synonymous with "the desire of some preponderating pleasure," pleasure meaning with them good of *every* kind; though I cannot let this latter statement pass as in all respects representing their meaning. A resolve is not strictly the same thing as a desire; it is rather the *turning* of the balance in favour of a preponderating desire; the action induced by the greater strength of the desire, not the greater strength itself. And what precisely happens at this moment of turning of the balance, or what is the true analysis of that moment's content, *this* it is which is the real question of Free-will.

Two important discrepancies, then, have now been signalled between what I may call Dr. Ward's and the determinists' preparation of the facts for analysis, between their several modes of stating the problem. The first is the claim by Dr. Ward to have a supposed immediate self-perception of the agent *per se*, at the moment of resolve or turning of the balance, included among the *facts* of the case, which they would deny; the second is Dr. Ward's assumption that the facts constituting cases of volition marshal themselves in such a manner, that actions which are led up to by attractions balance themselves *first*, and result in a "spontaneous impulse of the will," and *then* actions which are not led up to by attractions, but spring from resolves, in some cases overpower and reverse this spontaneous impulse, which Dr. Ward calls the will's "anti-impulsive action". It is with the latter of these discrepancies that we have to do now, in the first branch of the argument; we have in fact to consider whether there is any such difference in mode of origin between the actions which Dr. Ward says are led up to by *attractions*, and those which he says spring from *resolves*, as to warrant us in making them into two naturally antagonistic classes, *impulsive* and *anti-impulsive*. Determinists contend that, whatever may

be the analysis of the moment of turning of the balance, resolves themselves of *all* kinds are led up to by attractions of some kind or other, and consequently that Dr. Ward's distinction between impulsive and anti-impulsive action is arbitrary ; the analysis of all volitions being alike in this, that they are led up to by desires, decided by resolves, and carried out by actions consequent on resolves.

Let us now hear Dr. Ward's own statement of his theory (April, 1874, p. 9) :—

" We beg our readers then to fix their attention on that definite and decisive spontaneous impulse of the will, which is so very common a phenomenon, and to which we have so often referred. We entirely agree with Mr. Mill, as we just now said, that this spontaneous impulse of the will is infallibly determined at each particular moment, by the balance of pleasureableness as apprehended at that moment." [Dr. Ward explains in a note that the way in which, as he agrees, the will's spontaneous impulse is *formed*, namely, by the balance of pleasure, is quite unessential to his own argument, which turns solely on the question, whether it is ever *resisted*.] " But the whole deterministic argument rests from beginning to end on the assumption, that men *never resist this spontaneous impulse* : whereas we confidently affirm, as an experienced fact, that there are cases of such resistance—numerous, unmistakable, nay, most striking. What we allege to be a fact of indubitable experience is this. At some given moment, my will's *gravitation*, as it may be called, or spontaneous impulse is in some given direction ; insomuch that if I held myself *passively*,—if I let my will alone—it would with absolute certainty move accordingly : but *in fact* I exert myself with more or less vigour to *resist* such impulse ; and then the action of my will is in a different, often an entirely opposite direction. In other words, we would draw our readers' attention to the frequently occurring simultaneous existence of two very distinct phenomena. On the one hand (1) my will's gravitation or spontaneous impulse is strongly in one direction ; while on the other hand at the same moment (2) its actual movement is quite divergent from this. Now that which 'motives' [in the determinists' sense] affect, is most evidently the will's spontaneous inclination, impulse, gravitation. The determinist then, by saying that the will's movement is infallibly determined by 'motives,' is obliged to say that the will never moves in opposition to its spontaneous impulse. And in fact he does say this. All determinists assume as a matter of course, that the will never puts forth effort, for the purpose of resisting its spontaneous impulse. We on the contrary allege, that there is no mental fact more undeniable, than the frequent putting forth of such effort."

Take another passage from the same article, p. 11 :—

" We have already expressed our conviction, that at any given moment the will's spontaneous impulse (of which we have said so much) is infallibly determined by the preponderance of pleasure proposed. The thought of this preponderating pleasure may be called the 'preponderating attraction,' or 'the resultant of co-existing attractions'. Again we have often to speak of the will's 'spontaneous impulse' : this we will sometimes call the will's 'preponderating' impulse ; or, for brevity's sake, we may omit the adjective altogether, and speak of the will's 'impulse'. Resistance to this impulse may be called 'anti-impulsive effort' issuing in 'anti-impulsive action'."

Dr. Ward does not pass quite dry-shod over the question,

What determines the resistance to the will's spontaneous impulse? But his answer is of such a character as almost to surrender his whole contention. In the same article of April, 1874, p. 21, we read:—

“One further question remains to be asked. What are the *motives* which actuate a man, when he resists his will's spontaneous impulse? In every instance, by far the easiest course is to act in *response* to that impulse: and no one will take the trouble of resisting it, except for some unmistakably worthy motive; some clear dictate of reason. There are two and two only classes of motives, which occur to our mind as adequate to the purpose. First, there is the resolve of doing what is right. . . . Another motive, which often suggests itself, is my desire of promoting my permanent happiness, in the next world or even in this. . . . It is an observed phenomenon, we contend, that men do at times resist the spontaneous impulse of their will, when induced so to do by one or other of these two classes of motives: but where such motives are away, it seems to us a matter of course, that every one is always led by his predominating attraction.”

To the last sentence Dr. Ward appends the following footnote:—

“We do not of course for a moment deny that determinists include both the pleasureableness of virtue and the pleasureableness of promoting a man's own permanent interest among the attractions which influence his will. But it is a matter of every-day experience that the pleasureableness of this or that immediate gratification is more attractive than these at some given moment. And what we allege is, that men not unfrequently resist such preponderating attraction, for the sake of practising virtue or of promoting their own permanent interest.”

Not enough, I reply. Not enough, without adding to the last dozen words these further ones, *as distinguished from the pleasure of practising or promoting them*. This is what Dr. Ward must show, or fall into the determinists' position, which is, that the purpose of practising virtue or of promoting their own permanent interest *is* the preponderating attraction in these cases. And what can the indeterminists rejoin? Are virtue and self-interest such *thoroughly unpleasant* things that the pursuit of them can in no degree be owing to their attractiveness? Yet if some tinge of attractiveness is theirs, then, on Dr. Ward's principles, they must *pro tanto* be contributories to the resultant spontaneous impulse of the will; which nevertheless, as motives of its anti-impulsive action, they resist. Their position in the economy of volition is then a truly critical one; they are divided against themselves; they resist in one character what they contribute to form in another. The line which separates Dr. Ward from the determinists is in this place narrow indeed, and to me, I confess, invisible.

The sole difference is a purely arbitrary one introduced by Dr. Ward. Determinists, as he shows by quoting from Mill and Prof. Bain (April, 1874, p. 4, note, and again April, 1879,

pp. 14, 15), mean by strongest motive strongest *in relation to pleasure and pain*, and not merely strongest *in relation to the will*. By quoting them Dr. Ward merely means to keep them to their affirmation. Attractions of *all* kinds being included by them under the term motives, they allege that those which are stronger in relation to pleasure and pain are *also* stronger in relation to the will, and that, when any motive has proved stronger in relation to the will, we are entitled to *infer* that it was the stronger in relation to pleasure and pain. For we have, in many cases, no other means of testing the comparative strength of nearly-balanced attractions, in relation to pleasure and pain, than the observation of their strength in relation to the will, as shown by the decision of an act of choice. This, however, is not an *assumption* on the part of determinists, but is part of their theory of the case, founded on the innumerable instances in which not only pleasure is an undoubted motive power, but in which pleasures already known as *greater* are found to be *stronger* than pleasures already known as less; cases which, as they allege, are uncontradicted by any proved counter instances.

Dr. Ward, on the other hand, assumes an arbitrary and empirical distinction between attractions; two classes of them, namely, those of virtue and permanent self-interest, he sets apart from the rest, and opposes them to *pleasurable* attractions, under the title of resolves to resist impulse; as if they too had not a pleasure of their own, often very intense and in most cases very abiding. So that the force which they exert on the will comes in many cases rather from the permanence of an abiding latent thought, ready to spring forward into distinct consciousness in intervals of reflection, than from a transitory keenness in affecting the sensibility. The consciousness that yielding to some attraction will ruin the permanent and pleasurable sense of self-respect or peace of mind, will often drive out the attraction and occupy in its room. Sometimes it acts by embittering or enfeebling the attraction, sometimes by setting up a counter attraction, but in both cases it is pleasurable. On one side, then, is a certain vividness and pungency, on the other a *staying* power; but the pleasures which have a staying power are still pleasures, though of a different kind. And in judging the comparative strength of disparate pleasures such as these, often the only way open to us is to see which of the two is actually obeyed at the moment of choice. It is often unknown to the chooser himself till his own choice enlightens him. It is in this moment of ignorance, previous to choice, that he has that sense of being able to choose which is called the *sense of freedom*; and from that moment it is that what he *is* manifests itself in what he *does*.

Let us now take one of Dr. Ward's clear and, I must say, admirably stated instances ; it shall be taken from the Appendix of July, 1874, which is chiefly devoted to instances, and one which he evidently thinks clear and decisive (p. 9) :—

"Our next illustration shall be for the purpose of explaining, that the present issue does not turn at all on the question whether *effort* is put forth by the agent, but only *anti-impulsive* effort. With this view we will recur in the first instance to the illustration which we derived (April, 1874, pp. 3, 4) from the demeanour in battle of some courageous soldier. He will often put forth intense effort ; brave appalling perils ; confront the risk of an agonising death. But to what end is this effort directed ? He puts it forth in order that he may act in full accordance with his spontaneous impulse ; that he may gratify what is his strongest wish, his real desire : in order that he may overcome the enemy, obtain fame and distinction, avoid the reproach of cowardice, &c., &c. Such efforts as these we may call 'congenial' efforts. But now take the instance of a military officer—possessing real piety and steadfastly purposing to grow therein—who receives at the hand of a brother officer some stinging and (as the world would say) 'intolerable' insult. His nature flames forth ; his spontaneous impulse, his real present desire, is to inflict some retaliation, which shall at least deliver him from the 'reproach' of cowardice. Nevertheless it is his firm resolve, by God's grace, to comport himself Christianly. His resolve contends vigorously against his desire, until the latter is brought into harmony with his principles. Here then are two cases, which agree with each other as being cases of intense effort ; but the former is 'congenial' effort, while the latter is 'anti-impulsive'. What is most remarkable in the last named officer is his 'self-restraint' ; but it would be simply absurd to talk of self-restraint in the former instance. No one, who considers ever so little, can overlook the fundamental contrast between the two cases."

Yes, it is a very decided contrast. But it is not fundamental in respect of the nature of volition, and proves nothing whatever in favour of Dr. Ward's analysis of acts of choice. The "last-named officer" overcomes a real desire, but how ? By a stronger desire. He opposes a desire which is in process of becoming a resolve by a desire which has already become one ; opposes a new desire which derives its strength from its vividness by an old desire which derives its strength from its fixity. The same may be said of all the instances given by Dr. Ward in this Appendix.

Take his instance of a boy who is supposed to decide against running away from a school, at which he is miserable, on three sorts of grounds. First, he may represent to himself that home will, under the circumstances, not be pleasant ; this, says Dr. Ward, is a case of counter-attraction, his real desire now is to remain at school, and he remains. Secondly, he may consider that remaining will be more in accordance with the will of God, which is an attraction to him in consequence of his early training ; this, too, changes his real desire, makes it a desire of remaining, and he remains. But thirdly, from the motive, or resolve, of virtue and permanent self-interest, he sets himself to

resist that which is his spontaneous impulse and real desire, namely, to leave school ; and remains, though against his real desire. "Here," says Dr. Ward, "is a case in which self-restraint really does come in." The state of struggle while it lasts is "most unmistakably heterogeneous from that which we last described," that is, from the second case. Yes, different from it no doubt; but to this extent only, that the thought of virtue and permanent self-interest has (1) a different kind of attractiveness from that of obedience to the will of God, which in the case supposed has already become pleasant ; and (2) has a different kind of attractiveness from that of quitting school, an attractiveness owing to its fixity, and not to its vividness.

"The cases," says Dr. Ward in a footnote to p. 11, "the cases on which we insist are those, in which I *resolve* and *act* in direct opposition to what (at the very moment of acting) I *desire*. The undeniable existence of such cases is the fact, on which we rest as fatal to determinism." Observe, *at the very moment of acting*; thus precluding the possible misconception, that cases in which a new attraction preponderates over a prior one, thus changing my desire of one moment into a new desire of the next moment, are the cases he insists upon. There are cases, says Dr. Ward, in which we resolve and act in direct opposition to what at that very moment we desire. Is this true? Certainly not, in my opinion, and as I think I have sufficiently shown. In these cases, what we *most desire*, at the very moment of choice, is to do our *painful duty*.

Dr. Ward, it will be noticed, adopts as the fact from which he reasons, the one complex moment of conflict between impulse and anti-impulsive effort ; expressly excluding from that moment the consideration of its antecedents. This one complex moment of conflict, he argues, shows that the soul puts forth a *free* power, namely, in those cases where the anti-impulsive effort is victorious. But I would ask,—If he excludes from consideration the antecedents of the moment of conflict, how does he know that it is the *soul* which puts forth the anti-impulsive effort? For, taking it so, the *soul's* putting forth the effort is an inference, not an observation ; and the observation of the moment of conflict alone carries us no farther than to the *sense of freedom*, which is admitted on all hands to be a fact. If on the other hand the antecedents are taken into account, then experience shows that the soul's anti-impulsive effort is as much dependent on antecedents, though not perhaps on the same antecedents, as the spontaneous impulse. Dr. Ward's reply must be, as shown above, that we have an immediate intuition of the soul *per se*, in the very moment of conflict. And to this I now make the further reply, that this *alone* is not a sufficient premiss from which

directly to deduce its freedom. It is necessary *also* to maintain an intuition of it as an agent *which acts independently of antecedents* in the moment of conflicts ; which would be an intuition at variance with all experience, as I have endeavoured to show. Dr. Ward is thus driven to rest his case for freedom on the assertion, that we have, in the moment of conflict, an immediate intuition of the soul as a free agent, which is no more than supposing his case proved by stating that he knows it to be true.

## II.

Having now shown the utter fallaciousness of Dr. Ward's exposition of the *facts* which are observed in cases of volition, on which his entire disproof of determinism depends, I proceed in the next place to the second branch, the causation branch, of his argument. And the first remark I have to make is this, that the only circumstance which makes any *special* theory of causation requisite is that same fallacious diagnosis of the facts, which has been already exposed. There is, according to Dr. Ward, a remarkable phenomenon, of a very special kind, called anti-impulsive effort. How, then, does this come to pass, how is it to be accounted for ? If it were of a piece with the other phenomena of volition, as the determinists maintain, it would require no special and peculiar causative agency to be introduced to explain it ; the same theory of causation, whatever it might be, would serve for all. It appears, therefore, that the whole of Dr. Ward's second branch of the argument, his theory of causation, serves but to explain an anomaly arising from his fallacious diagnosis of facts in his first branch. It is his way of solving his own self-created difficulty, solving it, as we shall see, by greater difficulties.

The full doctrine of Free-will, which is Dr. Ward's conclusion, may be best seen in connexion with both branches of his argument, from an illustration which he gives near the end of his final article of April, 1879, p. 43 :—

“ I am walking for health's sake in my grounds on a bitterly cold day. My strongest present desire is to be back comfortably in the warm house ; but I persistently refuse to gratify that desire ; remembering the great importance of a good walk, not only for my general health, but for my evening's comfort and my night's sleep. Plainly, according to the Jesuit definition ” [“ *Potentia libera est ea qua, positis omnibus requisitis ad agendum, potest agere et non agere*,” quoted p. 42] “ my will acts with perfect freedom. My present action is resistance to my strongest present desire ; and I have full proximate power to abstain, if I choose, from the continuance of this action, by resolving to go indoors. But no less plainly this act is free, according to that definition of Free-will which *we ourselves* set forth ” [“ *Libertas est ea indifferencia adiva agentis, quæ, positis omnibus ad agendum requisitis, potest agere et non agere*,” quoted from F. Palmieri, p. 42]. “ My soul and body, co-operating as blind causes, generate my preponderating

spontaneous impulse towards going indoors ; while my soul, acting as an originative cause, generates my continued *resistance* to that preponderating spontaneous impulse.

"Conversely. I am sitting over the fire, with a novel in my hand ; and my strongest present desire is to continue in my present position. I remember, indeed, that nothing in a small way can well be worse for me, and that I shall pay dearly for my self-indulgence. *Video meliora proboque : deteriora sequor*, and I stay just as I am. Here again, according to the Jesuit definition, I am undeniably free ; for I am entirely able, without any further *requisita ad agendum*, either to continue my self-indulgent action or to abstain from it. And here again my freedom is equally manifest, according to *our own* definition of freedom. True, indeed, my soul is not at this moment acting as an originative cause ; but it has the *proximate power* of so acting if it pleases."

Here, then, we have the whole *modus operandi* outlined, and the theory accounting for the facts, as exhibited previously, may accordingly be stated somewhat as follows. The soul of man is a cause, or causal agent, which is free, that is, has the power of acting or abstaining, every other requisite for action being presupposed. Farther, it is an *originative* and not merely a "blind" cause, like physical bodies, *e.g.*, the sun ; though in regard to one class of its effects, namely, those in which it acts jointly with the body, it is a blind cause, acting with the strictest necessity (April, 1879, pp. 37, 38). Its freedom depends on its being also an *originative* cause, for "the notion of freedom is included in the notion of an originative cause" (*ib.*, p. 40). And being an originative cause, it must also be an *intelligent* one (*ib.*, p. 38). From the long passage just quoted it also appears, that the spontaneous impulse of the will is caused by the joint action of the soul and the body, while its anti-impulsive action is due to the soul alone, acting as an originative cause. Two other remarks of Dr. Ward's will complete the picture. "Firstly, when *the will* is said to act, this is a mere figure of speech ; for it is the *soul* which acts. Secondly, when the soul is said 'to act,' the immediate reference is to its own *internal* action ; whether or no that internal action be the *resolving* on, nay the immediately commanding of, some external act." (*Ib.*, p. 42.)

Such, briefly, but I trust sufficiently stated, is the theory which Dr. Ward undertakes to prove. Everything in it turns on the existence and nature of the "soul," for on its agency alone does free anti-impulsive action depend. What, then, is Dr. Ward's conception of the nature of the soul, and what is his proof of its existence ? These are points which require treating, on his part, with the greatest care and thoroughness, for they are the basis of his whole theory.

Yet it is precisely on these points that the critic's work is lightest. He has only to indicate *lacunæ*. Dr. Ward supplies no proof at all that the soul, as he conceives it, exists ; and no

evidence that his conception of its nature and powers is a true conception.

It is true that he *imagines* that he has done so. He imagines, no doubt, that he puts in evidence of the existence and powers of the soul, when he says, in a passage already quoted and criticised, "It is a matter of direct, unmistakable, clamorous consciousness, that during those periods" [of resistance to impulse] "it is my own soul and no external agency, which is putting forth active and sustained anti-impulsive effort" (April, 1879, p. 39). But this is a very different thing from having such a perception of the soul *per se*, its nature, and powers, as will serve for the basis of an explanatory theory. For such a basis we want proof of the existence and nature of the soul *per se*; not, as in the passage quoted, of the soul and its actions mixed up together. That may serve as a *description*, a preliminary description, of the things to be explained, but not as a proof of the causes explaining them.

Has, then, Dr. Ward no notion whatever of the soul *per se*? O yes, he has one which he throws in by the way, as an *obiter dictum*: "It is implied, we may add, in their" [the intuitionists'] "whole notion of a 'cause,' that a cause must be one or other *substance*. When they mention the influx of my volition into some blow which I deal forth, they would thus explain their meaning in detail. The blow is nothing else than a certain movement of my closed hand. The cause of that movement is my soul; which addresses, if we may so speak, to my hand that command, which is called a 'volition'." (*Ib.* p. 33.)

If it is implied in the intuitionists' whole notion of a cause, that it is a *substance*, some proof ought certainly to be offered that the notion is correct, and that causes which are substances really exist. But it may be said, though direct proof, that the particular kind of substance, called the soul, exists, may be wanting, still it may possibly be shown by Dr. Ward that *causes* exist, and that these must be substances; so that from that side, and indirectly, the proof of the soul's existence may be given. We have just seen that Dr. Ward refers us to the intuitionists' notion of a cause. Let us see how he expounds that notion; turning to the place at which he addresses himself to the task, in the "Causation" article of July, 1876, pp. 18-19:

"We consider on one hand, that the idea 'cause' is a simple idea, not composed of any others; and on the other hand, that it is a purely intellectual idea, not a copy of anything experienced by the senses. In the course of our articles we have already mentioned two such simple and purely intellectual ideas: *viz.*, 'necessary' and 'moral good': and to these we here add that of 'cause'. Now, of course, there is a certain difficulty in explaining an idea of this kind. Were it a copy of some sensation, we could con-

tent ourselves with referring to such sensation. Were it composed of simpler ideas, we could explain it by reciting those simpler ideas. But neither of these methods being (by hypothesis) available,—we can only suggest the occasions on which an inquirer may unmistakably recognise, what is beyond doubt a very prominent part of his mental furniture. Now the instance, most commonly given by philosophers of a ‘cause,’ seems to us most happily chosen for our purpose ; as being one in which that idea is exhibited with especial distinctness and prominence : we refer to the influx of a man’s mental volitions into his bodily acts. I am urgently in need of some article, contained in a closet of which I cannot find the key, and accordingly I break open the closet with my fist. Certainly my idea of the relation which exists between my volition and my blow, is something indefinitely beyond that of mere prevenance” [Dr. Ward’s word for phenomenal sequence]. “If on the one hand that idea is incapable of being analysed, on the other hand it is to the full as incapable of being explained away or misapprehended.”

Not one word about *substance* from beginning to end ; not one word about that which, as we since learn, “is implied” by intuitionists “in their whole notion of a cause”. Perhaps it will be replied, that in this long passage Dr. Ward is explaining the notion of cause generally, of causation, not of a *cause*, *i.e.*, something which has or exercises causation. This, I believe, is partially, though not altogether, the case ; but even that does not mend the matter. The connexion between a substance as cause and its power or attribute of causation is left entirely blank. Dr. Ward seems to slide from one to the other without noticing it. In the above passage he begins with explaining causation, and continues doing so down to the words “mental furniture”. On the other side of the full stop which follows them, he has probably a causal *substance* in his mind. But if he has, he takes no notice of the newly introduced notion ; still less does he offer any explanation of how causation can possibly be connected with a causal substance. And in the first part of the passage he is doing neither more nor less than what I have elsewhere noticed that Hegel and Schopenhauer do (MIND XVI., p. 501) ; that is, he is assuming the notion of *efficacy* as an ultimate and unanalysed datum.

The soul, then, is not proved by Dr. Ward to exist as a causal substance, either directly or indirectly ; still less is it proved to exist as an originative, intelligent, and free causal substance. The proof breaks down from the beginning, or rather no proof is really attempted at all. For it is suspended entirely on the intuitionists’ doctrine of causation ; and, even if that doctrine were true, would break down just the same. For the link of suspension is wanting.

It is painfully interesting to see the care with which Dr. Ward accumulates his logical apparatus for explaining and demonstrating his doctrine of causation, which is destined after all to be of so little service. Two great principles there are, he

says, which it is requisite to make good against phenomenists ; one is the "principle of certitude," or as he elsewhere calls it "of intrinsic certitude," which is this: "Whatever a man's existent cognitive faculties, if rightly interrogated and interpreted, avouch as certain, is thereby known to him as certain" (July, 1876, p. 5). The other is the principle that "the human mind has a power on occasion of certainly and immediately cognising necessary ampliative truths as such"; meaning by *ampliative* what are more frequently called synthetical as opposed to merely analytical judgments. (*Ib.*, p. 7.)

The "principle of causation" or "the causation doctrine" (both phrases are Dr. Ward's) is maintained by him to be a necessary ampliative truth ; and is expressed in the statement, that "whatever has a commencement has a cause" (*ib.*, p. 13). All this part of his argument, Dr. Ward frankly and fairly tells us, is based "not on grounds of experience, but of intuition". "It is only," he says, "through *intuition*, that either phenomenists or any one else can possess experience of *phenomena*. Those particular intuitions, which are called acts of *memory*, are literally the only basis they can allege, for any one experience which they cite" (*ib.*, p. 14).

Here we have the whole logical process outlined. Intuition is the basis ; then the two great intuitive pillars, the principles of certitude and of necessary ampliative truths ; then the particular necessary ampliative truth of causation. And what I maintain is, that, even if all this body of logic were sound and true, still Dr. Ward would not have proved his case, because the link which connects it with the soul as a substance is wanting. I leave it therefore uncontested ; and the more readily because I have elsewhere (in the *Philosophy of Reflection*) had occasion to criticise at some length that part of Dr. Ward's theory which identifies memory with intuition, together with several of its consequences ; and this doctrine really contains the root of Dr. Ward's whole system. There again we touch what must always be the real ground of any controversy, namely, concrete facts of consciousness which exist for all men, and in the analysis of which their power of mental insight is most usefully taxed. This, too, it is which gives the former part of the present argument, its psychological branch as Dr. Ward calls it, its greater interest and importance, compared to the second, which is occupied with the abstract entities of substance and cause.

And here it is worth while to remark that, in the article of July, 1876, Dr. Ward expresses the doctrine of causation in volition in a way which is very different from his detailed statement of it in April, 1879, and which, taken alone, might well be accepted by determinists. He says, p. 8: "But Free-will

includes another doctrine besides that of indeterminism ; it includes the doctrine that man is a self-determining cause of volition." Now, determinists may well accept the general statement that *man* is a *self-determining* cause of volition ; for, first, there is no statement about the soul being the man, or being a substance ; and secondly, self-determination is at any rate determination. But this general statement is plainly not the one which Dr. Ward means to be his final one. It will stand, whatever theory we may hold about the nature of the agent concerned in volition, whether it be an immaterial substance called soul, or a particular kind of material substance, namely, some living portion of nerve organism of which consciousness is a function. In whichever way, then, we conceive the nature of the agent, determinists need not hesitate to admit that he exercises, in volition, a self-determining power. What they deny is, that he exercises, in volition, a power of choice which is *not* determined by his nature, that is, by *himself*. They maintain that the exercise, and even the existence, of such a power as that last described is not capable of being intelligibly construed in thought ; that when it is said to be conceived or imagined, as it appears to be by Dr. Ward (April, 1879, pp. 33, 38), it is in a loose sense of those terms, a sense not including intelligible construing in thought ; and that the notion of the soul as a substance serves no other purpose than that of veiling this want of intelligibility, by assigning an obscure source of the power which may render it acceptable to belief, without rendering it intelligible to understanding.

An agent having some *nature* or other must be conceived in or before conceiving an *act* of any kind. When we say that an act is the act of *an agent*, we mean that it is determined wholly or in part by the *nature* of the agent. What he *is* manifests itself in what, under the circumstances, he *does*. Let us then assume, for argument's sake, that the agent is a substance called soul ; and let us take those acts which are called acts of choice. Then any act of choice will be determined by the nature of the soul ; and that is the determinist's theory ; *liberty* consisting in the determination of the choice by the nature of the agent (which on the present assumption is the soul).

For, when we conceive attractions soliciting the soul (or agent, however conceived) in opposing directions, there must necessarily be conceived also something which, being solicited, is capable of re-acting upon the solicitations ; and this something we now call the soul, in that state of consciousness which it has when the solicitations begin, and which passes into other states of consciousness when they continue ; which are the 'internal circumstances' spoken of by determinists, the soliciting attrac-

tions being called 'external circumstances'. The re-action of the soul upon the solicitations, so as to decide either between them, or between some of them and some of its own internal states, is what is known as choice or volition. Now all the elements of the problem are here taken account of, and therefore the determinists are justified in saying that the will is necessarily determined by the balance of motives, or circumstances external and internal. In the re-action of the soul with its 'internal circumstances' upon the external solicitations consists its freedom. If it were determined in any other way than by its own re-action upon the external solicitations it would not be free, for it would not be exerting volition.

But Dr. Ward's theory, so far as I can understand it, is that *liberty* consists in the *non*-dependence of the choice on the nature of the soul, in *non*-determination by it. And when asked—On what then does it depend? his reply, I imagine, would be—On the soul's power of choosing. I pass over the tautology of this supposed reply, its alleging the possession of a power of choice as the ground of exercising choice; and confine myself to the remark that, on this showing, the soul is only then perfectly free when its own nature is perfectly inoperative in determining its acts of choice. We are required to conceive a perfectly colourless and independent power of choice, a bare faculty of resolve, severed from the rest of the characteristics which compose the soul's nature, for only in that severance is it conceived as the ground of freedom; and yet that the soul itself, including its nature, which does not contribute to the free choice, is blamable or praiseworthy in consequence of it.

Dr. Ward then, I think, is in this dilemma: either the free choice, or resolve, of the soul is caused by the soul, and then he is a determinist; or else the free choice, or resolve, of the soul is caused by the bare power, in the soul, of freely choosing or resolving, and that is tautological trifling. I argue therefore that, unless Dr. Ward is a determinist without knowing it, the only meaning attributable to his doctrine of free-will is this:—that a free act is an act without an agent. On this point I would refer the reader to Jonathan Edwards's *Enquiry concerning Freedom of the Will*, Part II., Sect. iv., entitled, "Whether volition can arise without a cause, through the activity of the nature of the soul". Indeed, in all parts of the subject, except its connexion with physiology, which is not treated by Edwards, this classical work is an authority of the highest order.

And this leads me to make one or two remarks on Dr. Ward's belief that the existence of guilt and sin (April, 1874, pp. 15, 34-5), and the existence of morality in the Christian sense, and of a moral government of the world (April, 1879, p. 18), are

incompatible with determinism. His argument may be stated briefly, but not I hope unfairly, as follows :—Since we did not make our own nature—then, if our acts of choice are determined by our nature (as they are, in the last resort at any rate, on the determinist's theory), we should not be morally responsible for our acts of choice, unless we suppose that we have a power of choosing *independent* of our nature.

Such is the argument as I apprehend it, and stated as strongly as I can state it. I am not insensible to its great apparent cogency. But, in the first place, I think it is founded on a misconception of what moral responsibility is. Moral responsibility consists in responsibility to a tribunal of a moral character, such as we conceive our own conscience to be, and God to be. It does not consist in our being *justly* responsible for certain acts. But the question whether or not we are *justly* responsible, in the sense of justly deserving praise or blame, reward or punishment, for certain acts, is a question for the moral tribunal itself ;—the *moral* character of which tribunal makes our responsibility a moral one.

Now these two ideas of moral responsibility are confused in the above argument. It is argued, virtually, that we are not *justly* responsible for acts flowing from our own nature, so far as we did not cause that nature to be what it is. And I reply, that this is a question for the moral tribunal to decide ; and that we are *as a fact* morally responsible for those acts, because we are and feel ourselves to be responsible before moral tribunals—namely, God and our own conscience. If our own conscience should be blind, yet God will judge right. He will apportion justly praise or blame, Whose are, in Milton's language, “ the pure eyes, and perfect witness of all-judging Jove ”.

The theory that we cannot conceive ourselves to be morally responsible, unless we can show, by some fine-spun argument, that we are in some cases justly punishable, is a theory impugning the competence of the moral tribunals named. Like a too eager attorney, it would have us go to law with God. The very opposite temper from this has been the mark of men not usually reckoned as deniers of moral responsibility. “ Behold,” says a Hebrew Psalmist, “ I was shapen in wickedness, and in sin hath my mother conceived me. But lo, thou requirest truth in the inward parts.” This writer at any rate felt no incompatibility between the sense of sin and the belief that his nature was not self-created.

Still it may possibly be said, that this evades and does not meet the objection, or rather that it meets it only by a counter-allegation, supported indeed by testimony, but still an allegation *of fact* only, the fact that persons are found who feel moral re-

sponsibility and moral guilt *though* feeling also that it attaches to them through no deed of their own. This case, it may be said, is an anomaly, inconsistent with the plain dictate of universal good sense, that no man is *justly* responsible for what he did not himself choose to do or to omit. It is required, then, to be shown in answer to this further objection, what the reason of the case, underlying the fact of the case, really is; and besides, that this reason of the case brings it *under* that plain dictate of universal good sense, and does not leave it standing out, as a counter fact, or difficulty in the way of our accepting the dictate. This I will now attempt to show.

In cases like that quoted from the Psalms, the thing for which the agent accepts moral responsibility is not the mere fact of having been born with such and such a nature, irrespective of what that nature is; but it is the act or acts of choice, springing from that nature, in doing which acts of choice he has had that sense of having power to choose which is called the sense of freedom. He is in fact *so born*, the nature which he is born with is such, that he has that sense of freedom in innumerable acts of choice; and the responsibility which he accepts is for his acts springing from his nature, for his acts and his nature together. It is as much part of his nature to be capable of free choice, as to have innate tendencies and affections to choose between.

Now I say, that what is meant by *freedom* is to be learnt from this *sense of freedom*, and from no other source. The sense of freedom in the agent is the subjective aspect of the objective freedom in the act of choice, is what warrants us in calling the act free, just as, when we call a rose *red* or a stone *hard*, our sensations of redness and hardness are the warrant for calling them so. We are not to look for any other freedom, any *real* freedom as it is called, of which the sense of freedom is a copy, or to which it gives a testimony. The sense of freedom is the real freedom. Volition, choice, resolve, are free acts by the nature of the case. The sense of freedom is an essential part of the consciousness we have of them.

Now the sense of moral responsibility is attached to, and founded on, the sense of freedom, and its reality and objectivity are warranted in the same way, namely, by being confirmed in consciousness by reflection, on repeated self-examination. We are morally responsible for acts of choice (and indirectly for their consequences), because *conscience*, which is reflection on such acts, has that sense of moral responsibility, and a deeper and keener sense of it the more it reflects upon them.

But this sense of freedom, which is the real freedom, together with its corollary moral responsibility, is not opposed antitheti-

cally to necessity ; it is not freedom *from* the laws of the agent's nature, but it is a part of, and bound up with those very laws and that very nature. The agent is not other than his nature and its laws ; nor is his nature something imposed upon him externally, as seems to be imagined by those who talk as if it were *possible* for a man to be morally responsible for the nature he is born with (in the narrow sense they give the words), as they plainly do, when they repel the notion on the ground, not of its impossibility, but of its injustice.

The agent other than his nature and its laws, and his nature something imposed on him externally—these are notions required by the fictitious freedom, falsely called *real*, falsely supposed to be the real existence of which the sense of freedom is a copy and a testimony. Required by it, because, unless the agent were pictured separable from his nature and its laws, that fictitious freedom would be an abstraction, a power without an owner. An owner for the fictitious 'double' of freedom is found in an equally fictitious 'double' of man, his substance or soul.

Returning to the sense of freedom, and to what has now been shown concerning it, I draw the conclusion that an agent is morally responsible for that part only, for so much only, of any of his acts as is accompanied by a sense of freedom, and for the consequences of that part ; meaning by consequences, the habits and affections which that voluntary part of his acts has produced in him. And this conclusion brings the case under that dictate of universal good sense which we began with. But the interpretation of what part and how much of his actions an agent, on this principle, is responsible for, is a most difficult inquiry ; indeed it is this that makes the chief and deepest difficulty of cases of conscience strictly so called. The sense of this, I have no doubt, partly prompted the exclamation in the Psalm quoted above. An endless labyrinth of self-examination seems to await us when we begin to dwell on these things, drawing us on into depths of thought "beyond the reaches of our souls".

As I find myself on theological ground, I will venture one more remark before quitting it. It refers to Dr. Ward's holding together, as if perfectly compatible, his doctrine of indeterminism and the doctrine of God's perfect knowledge of future human free acts. He says, "God's knowledge of future human acts supposes, as its very foundation, the will's *free* exercise in this or that direction. It is strictly and fully, we maintain, within my own power, that God shall have eternally foreseen me as acting in this way or in that" (April, 1874, p. 32). Now, that a determinist should hold this view is quite simple and natural ; for a determinist considers that all acts, including those

which are free in the sense of being due to the agent's self-determination, are determined by the *nexus* of the whole scheme of existence, of which they are a part. That future acts should be capable of being *known* supposes, according to the determinist, that they are, by some means no matter what, determined to take place in one way *and not in another*; for otherwise knowledge of them would be impossible for want of an object.

There is a *real* and there is an *apparent* contingency; real, on the supposition that some events, or acts, are undetermined by conditions; and apparent, on the supposition that our ignorance of their conditions is what makes us regard them as undetermined. Now, *real* contingency, *real* indeterminism, and not only apparent, is what is usually meant by indeterminism; whereas determinists hold that contingency is never otherwise than apparent only. In what sense, then, does Dr. Ward hold his much talked of doctrine of indeterminism? Or rather, how is it possible for him to hold indeterminism in the *real* sense, and yet to maintain that God has perfect knowledge of future free human acts? To me the two things seem incompatible.

True it is, as Dr. Ward points out, that we conceive God's knowledge of future events as eternally present to him, and not as a mere fore-knowledge based on calculation of conditions, as human fore-knowledge is. But then this very conception is contradicted by indeterminism; for on that theory some events and acts are undetermined up to the very moment of their taking place, so that till then there is literally nothing to be known, and God's knowledge fails, not because it is a knowledge based on calculation (which it is not), but for sheer want of a knowable object. The conception of an eternally present omniscience is taken away, when existence itself is conceived as subject to a limitation which attaches only to our mode of perceiving it, namely, to our inability to experience it otherwise than piecemeal, in successive moments of time. Determinism alone is compatible with God's eternal fore-knowledge, because it alone conceives the future as knowable notwithstanding that it has not actually taken place.

The only explanation of this inconsistency which I can imagine is, that Dr. Ward has formed no *positive* conception of indeterminism at all, and has no positive theory of it, but only what he himself calls the "purely negative" one, that determinism is false (April, 1879, p. 30). Certain it is, that throughout these articles he gives us no clear or positive conception of how he imagines *real* indeterminism to be possible. *Apparent* indeterminism, on the other hand, is a determinist doctrine, and indeed an essential part of the theory. Again, then, we find Dr. Ward indistinguishable from a determinist.

Far different from Dr. Ward's is the estimate I am led to form of the nature and validity of determinism, of its function in philosophy, and even in religious philosophy. To those who are dissatisfied with the crumbling corner-stones of Scholasticism, its notions of *substance* and *substantial cause*, those Platonic fossils embedded and preserved in the Aristotelic strata,—to them the law of the perfect uniformity of the course of nature, on which determinism is based, is the one firm bridge connecting the Unseen with the Seen World. To use another image, it is the one sound logical plank in the vessel of any philosophy which includes the Unseen World in its purview. Without it, scepticism as to the existence, or at least as to the knowability, of the unseen world would inevitably break in upon us. To this it is that we owe the logical possibility of the conception, that the seen world, to which we belong, belongs itself to a vaster whole, with which it is linked in the adamantine chain of causation. Without this conception religious philosophy would be a dream. No ground on which thought of man could rest would be left for it. *Real* contingency, *real* indetermination, mean chance; and chance means scepticism, both in practice and in speculation; in practice it means life without purpose, and in speculation, thought without belief.

In the domain of practice Free-will is the link which welds together the moral action of man with the laws of the universe. The nature of man, with which he is born, is such that he not only feels various attractions, but is able consciously to incline to one and decline another. This is his power of choice, of will, of freedom. It is a part of his nature. It is rooted, with his nature, in the necessary laws of the universe, and is itself one of them. By it man is *entrusted* (in his corner of the universe) with the carrying out of God's eternal purposes, becomes an agent for making nature *in act* what from eternity it is *in potency*. In Brynhild's words to Sigurd, in Morris's noble version of the great Epic of the North, the *Volsunga Saga*, we find this interdependence admirably expressed :

“ Know thou, most mighty of men, that the Norns shall order all,  
And yet without thine helping shall no whit of their will befall.”

This is possible only if conscious freedom is so welded together with unconscious action as to make one indivisible act of choice, in which the two strains of freedom and necessity are distinguishable indeed by thought, but are not separable into two acts, one bound, the other free. Necessity is the inseparable condition, or rather let us say *co-element*, of freedom. And without that co-element freedom is incapable of being construed to thought, is something as impossible as walking without ground to tread on, or flying without air to beat.

But indeterminism imagines a freedom apart from necessity, and places it in a "substance" apart, which solely because supposed to be independent of necessity is called a free agent. And see what difficulties this separatist conception gives rise to. First, the soul-substance must be admitted to have two separate modes of action, one when it acts by itself apart from the body, in which it is originative, intelligent, and free; the other when it acts jointly with the body, in which it is determined, blind, and necessary (April, 1879, pp. 37, 38). Endless questions, with no visible solutions, are suggested by this notion of duplicate action. And, secondly, the inevitable implication of freedom with necessity follows the soul-substance even into its supposed originative and free acts, its acts of resolve. A resolve is always analysable into some end or purpose compared with and desired more than others, then desired to the exclusion of others, then connected in thought with the means of realising it. It is a complex and analysable state of consciousness, and connected with other states before and after. To treat it as an act originated by the soul, a literal *creation*, and to give its origination by the soul as the only explanation of it, is therefore in contradiction to the known analysis of the act itself.

The indeterminist theory then, as given by Dr. Ward, is thus committed to maintain two distinct separations of the inseparable, the first when it separates freedom from necessity in the act of resolve, the second when it imagines a separate agent of freedom, the soul-substance. It makes freedom into an entity *per se*, and it makes the soul into an entity *per se*. The latter has no warrant in analysis, and the former flatly contradicts it. It is therefore justly characterised as *empiricism*, because it places its ultimate explanations in entities which, admitting analysis, are given out as unanalysable. And not the less empiricism, because, owing to the noumenal character of its "substance," owing to the absolute character of its "intuitions," it is empiricism of an *ontological* kind. The battle between indeterminism and its rival theory is but one division of the general conflict between empiric and analytic philosophy.

SHADWORTH H. HODGSON.

NOTE.—Since the above was written, a further article by Dr. Ward, "Supplementary Remarks on Free Will," has appeared in the *Dublin Review* for October, 1879. It is a recapitulation and enforcement of his previous positions, with more illustrations and replies to criticisms. No new position is taken up in it, nor are any new arguments employed. It seems therefore not to call for additional comment. The same remark is to be made on a still later article, "Ethics on its bearing with Theism," *Dub. Rev.*, Jan., 1880.

## VI.—NOTES AND DISCUSSIONS.

### THE FUNCTIONS OF THE CEREBRUM.

PROFESSOR GOLTZ, of Strasburg, has recently added, in *Pflüger's Archiv* XX. 1, a third memoir on this subject to his two former memoirs, noticed in MIND V. and VI. It fills 54 pages, and is equally remarkable for its positive results and for its vigorous polemic against the doctrine of strictly localised brain-functions, as variously propounded by Hitzig, Ferrier and others. In view of its exceptional importance, a somewhat extended summary of its main points is here given.

Goltz begins by urging the necessity of studying the more complex brain-processes in the light of the simpler processes of the spinal cord, and, in the case of operations on the cord, seeks especially to distinguish between the *temporary* and the *permanent* effects. While separation of the cord from the brain hardly affects the spinal reflexes in the frog, it almost destroys them at first in mammals; but thence to draw the inference that many actions which are spinal in the frog are of cerebral origin in the mammals is quite unwarranted. The cord has analogous functions in both; only, in mammals the spinal reflexes are more manifold, and, being obliterated at first, they do not reappear till the wound of the operation heals and other effects of it have passed off. The question is then how to explain their temporary disappearance, and their reappearance for good if the animal has been properly tended during the time of recovery. The connexion of brain and cord is not re-established. Neither can it seriously be maintained that there is a new formation of reflex centres in the disconnected cord. The only possible supposition then left is that the natural functions of the cord are for the time *arrested* by the stimulus from the wound of the operation, not otherwise than, as it is well-known, the regular stimulation (through afferent fibres) of one spinal centre has an inhibitory effect on other centres for the time being. At all events, one thing is clear, that sharp distinction must always be made between the temporary and the permanent deficiencies (*Ausfallserscheinungen*) resulting from any operation on the nervous system. But this is just what Hitzig, Ferrier, Carville and Duret, Soltmann, &c., have overlooked in operating on the cerebral cortex. Goltz, for his part, besides being able to confirm his former account of permanent deficiencies in all essential points, believes himself now to be far on the way to show that the analogy between the nervous functions in the lower and higher animals holds not only, as long before proved, for the spinal cord but also for the cerebrum. He has a dog which has long survived the temporary effects of extensive destruction in both halves of the cerebrum, and which behaves very much like a frog in similar circumstances. This dog, which may now be described as "an eating complex reflex machine," was subjected (always under the influence of chloroform) to an improved application of the method

of washing-away the cortical substance described in Goltz's previous memoirs. Four times within eight months in 1877, large portions were removed, first in the so-called motor-zones, then in the posterior lobes, left and right. The animal recovered perfectly, and the effects of the operations, in the form they came to assume in the course of 1878, have remained without further change (down to May, 1879), so that they may now fairly be regarded as *permanent*.

The effects are described at length (pp. 10-26), and agree in the main with the results given in the former memoirs. Touch is greatly blunted over the whole surface, but by no means extinguished. Sight, after wholly disappearing for a time, is recovered to the extent that locomotion is distinctly guided by retinal images; the dog sees no better than, but sees as well as, a frog deprived of the cerebrum. Hearing, Taste, and Smell, which seemed to Goltz unaffected in his former experiments with other dogs, are now proved to be reduced but still not wholly absent—just like sight and touch. Movements are as energetic as ever, though apt to be rendered uncertain, by reason, apparently, of the imperfect tactile sensibility. The power of localising in external space or on the surface of the body is profoundly affected. There is great voracity, and nothing is held of account except as it can be eaten. No sexual appetite. No sociability with dogs or men. No sense of property or sign of resentment when despoiled of a bone or other food. Nevertheless, the animal is subject to sudden and swiftly passing gusts of fury in particular circumstances—when lifted from the ground, when the fore-paw is long held, &c. It can, with some trouble, be induced to play. Excretions normal. Very little, but still some traces of learning by experience; the dog can find the table on which meat is kept, and, having been bitten when taking bones from other dogs, is now warned by their growls to refrain. No trace of reflective or inventive faculty; the dog remains under a chair, round the legs of which a string is tied, when other dogs escape at once by creeping under or stepping over. Like brainless frogs, it performs under stimulation a number of reflex actions (some of them very strange) with the regularity of a machine. Summing up: "This dog, under extensive destruction of the cortical substance of both hemispheres, especially the temporal and occipital lobes, is profoundly imbecile; shows a blunted sensibility and peculiar disturbance of sight, hearing, smell, and taste; the unimportant disturbance of its movements is sufficiently explained by its imbecility and blunted sense." The facts are confirmed by a number of similar cases, in which the experiments, if carried less far, were also protracted over months. Besides showing that hearing, smell, and taste are affected with the other senses, the longer and ampler experience has proved, as regards movements, that the power of using the fore-paws as hands is not, as Goltz formerly thought, permanently lost. How much in the account of permanent deficiencies, as it now may be supposed finally made up, is due to destruction of the grey or of the white substances respectively, and how much perhaps to unintentional injury of the corpora striata and optic thalami, can only be determined by further investigation.

Before passing next to apply his present results to the question of the localisation of functions in the brain, Goltz offers some remarks on the positions taken up by other theorists. In reply to Hitzig, Ferrier, and Munk, who have all urged that his method can yield no information about the functions of limited areas of the cortex, he grants that it has a bearing only on the functions of the lobes generally, but contends that this is the first thing to be settled. Till it is seen whether Sense and Will are at all bound up with particular areas of the brain-surface, it is idle to look for special centres for leg, tail, or under-jaw. When Hitzig, Ferrier, and Munk agree so little that to the parietal lobe in the dog they respectively assign muscular sense, voluntary movement and touch, it is time to raise the previous question. Against localisation, in principle, Goltz has nothing to urge ; but being able to form an idea of the brain quite different from the one now current, he requires much more decided proof than any of the recent theorists have brought for their various schemes. Hitzig and Fritsch's electrical stimulation of the cortex proves nothing ; the fact that over great tracts no response is forthcoming makes it doubtful whether at any point, whence response follows, it is the grey surface itself that is stimulated ; if it were, it is not to be supposed, whatever be the function of those silent regions, that some motor expression would not be the result when the function is electrically heightened. Ferrier, who finds the excitable region more extensive (using stronger currents) than Hitzig, affords no criterion between the movements which he supposes to spring directly from motor-centres and those which he regards as reflex ; all alike might, with Schiff, be regarded as reflex. As for the harmony supposed to exist between the results of stimulation and extirpation of the localised centres, it is quite superficial ; where Ferrier sees paralysis of movement following extirpation of the fore-leg centre, Hitzig sees loss of muscular consciousness ; and while it is never pretended by the localisers that similarly definite results can be got with any other motor-centre, other observers have found that the motor disturbance in the fore-leg does not always follow, or last any time, upon extirpation of the supposed centre, and equally appears when other 'centres' are destroyed. But, Goltz goes on to urge, it is upon the question of restitution of function that all the previous localisation-hypotheses most completely break down. After a few days, or at most weeks, the motor-function disturbed by destruction of a 'centre' is found to be restored, and the question is where the new 'centre' has arisen. Nobody has been able to find a new centre by electric stimulation, though this method ought to be as good for new as for original centres. Three suppositions are possible, and have all been maintained in the face of facts when not at the sacrifice of the very principle of localisation. (1) Carville and Duret with others suppose that the functions lost for a time are taken on by other parts of the cortex in the same hemisphere : this view, besides surrendering the principle, is at variance with the fact that the whole cortex of one hemisphere may be destroyed without permanent loss of function. (2) Ferrier and others suppose that the lost functions are

taken on by the corresponding parts of the other hemisphere : the mistake here (since there is no doubt that each hemisphere is connected with all the muscles and sense-organs of both sides) lies in supposing, against the evidence of facts, that only the symmetrical or corresponding parts can thus supplement each other. (3) Ferrier farther supposes, in the case where movement is restored after destruction of the 'motor-centres' in both hemispheres, that the function is taken on by the corpora striata; and in like manner Luciani and Tamburini suppose that sight, after destruction of both its cortical centres, may be restored through the optic thalami and corpora quadrigemina : but this is giving up the principle of localisation in the hemispheres altogether, and is besides a most incredible demand to make upon organs so heterogeneous in character. On the whole, Goltz cannot doubt that the day will come when all the recent fine-spun hypotheses of sharply defined cortical centres—founded mainly or chiefly on the observations of the *immediate* effects of brain-lesions—will be as completely forgotten as the phrenology of Gall.

The true way of localising brain-functions, according to Goltz, must consist in following the line chalked out by Lussana and Lemoigne before the practice of electrical stimulation began. The first thing is to settle what are the permanent effects of the destruction of large cortical areas; the permanent effects of small lesions may be then sought for afterwards.

Goltz formerly determined the effects of destruction over the whole of *one hemisphere* (except the inaccessible base) in dogs :—No marked loss of intelligence; disposition to sleep in one old dog, but neither this nor sign of being easily fatigued in another at its prime; sight and touch affected on the opposite side; probably other senses also, but hardly to be determined; not a trace of muscular deficiency, except a disposition to slip in the limbs of the opposite side, doubtless through blunted tactile sensibility; tendency to turn towards the injured side, but with no inability to move straight forward for considerable distances; energetic movements towards the sound side.

He next sought for the effects of extensive destruction in the *parietal* lobes of *both* sides :—Some loss of intelligence; power of coming at call retained, but indifferently by what name; permanent affection of vision; men and dogs recognised, but the empty hand snapt at as readily as meat; no fear at bare sight of whip, but cowering when it is shaken or cracked; obstacles avoided in walking, even when small, but not a thin string; blunted tactile sensibility; forcible but clumsy movements; no muscle paralysed.

In one dog that survived for several months destruction of the *temporal* lobes on *both* sides, hearing was affected (not destroyed, as Munk, who places the auditory centre here, would maintain), also sight and touch—in fact, similar effects as in the case of the parietal lobes.

In one dog that survived for forty days extensive destruction of the *occipital* lobes on *both* sides, sight was deeply affected, but not to blindness; moving to come at call, it failed in direction; intelligence

was considerably lessened ; bluntness of touch wore off shortly before death ; there was no disturbance of movements. Smell was affected in this case, and also in the two cases last noted, *e.g.*, chloroform was taken without the usual reluctance.

In the *frontal* lobes destruction seems to have less effect ; with partial destruction the results are unimportant ; after the largest possible destruction on *both* sides, the effects are like those in the parietal lobes.

As the result of all his experiments put together, Goltz expresses himself as follows :—

(1) After destruction to any extent of any part of the cerebral cortex, the animal, if it survives, retains the power of conscious Willing over all the muscles of its body. It is not possible, by any lesion confined to the cortex, to produce permanent paralysis of any muscle. Every piece of the cortex seems able to become the organ of Will, and seems to have independent connexions with the executive bodily members. There are no special motor centres exclusively concerned in particular voluntary movements.

(2) In like manner, it is not possible, by destruction of any part of the cortex, to cause total loss of touch in any part of the body, or total loss of any of the other senses. The animal can always be brought, by every one of the senses, to perform movements that may be regarded as signs of conscious Sensation.

(3) Intelligence is affected by any considerable destruction in *both* hemispheres. The animal becomes stupid when more than the eighth of an ounce or thereby is removed from the surface of each hemisphere, and extensive destruction is followed by utter imbecility.

(4) It is not clear whether all parts of the cortex are perfectly equivalent. So far, the experiments point to a certain difference between the occipital and parietal lobes—vision being more affected by destruction of the occipital lobes, while the skin-sensibility, with the connected power of definite movement, suffers more by destruction of the parietal ; perhaps, however, in the latter case, the basal ganglia are more liable to be implicated in the experiment.

On the whole, Goltz has acquired the conviction that every division of the cortical substance of the brain participates in the functions from which we infer the presence of Feeling, Will, and Intellect ; every division is independently connected with all the voluntary muscles and all the sensory nerves of the body. There is no arrangement of small circumscribed centres, motor or sensory.

Goltz then devotes a section to the special question of the "Sight-centre" ; first remarking on the great discrepancy of opinion among the localisers as to its position that they are all both right and wrong—right in what they assert, wrong in what they deny—because in reality it is more extended than all their "sight-centres" put together ; and then supporting his formerly expressed opinion that the defective sight following on cortical lesions consists in a dim confused vision, "as if in a fog," against Munk's view that the defect is due to obliteration of representative images, whereby the animal is reduced to seeing "like a new-born child".

In conclusion, Goltz seeks to account for the phenomena which have led the localisers to their mutually contradictory hypotheses. Just as it is universally allowed that temporary inhibitory effects follow upon operations on the cord, so he believes that *all* parts of the central nervous system may suffer temporary arrest of their functions from an operation on the cortex. The effect, so far as the cerebrum itself is concerned, is much smaller after a first operation than after later ones; but, even after a first operation on one hemisphere, it may be supposed that the rest of the hemisphere is for the time disabled, and that it is through the other hemisphere that the animal, on emerging from the influence of the chloroform, at once exhibits (as it does exhibit) full consciousness. How far the basal ganglia are involved in the phenomena, cannot be determined so long as their own functions are so little known, but it seems clear that the mesencephalon and cerebellum, and even the medulla and the cord, may for a time be thrown out of gear from the cortex. The important thing always is to distinguish between the passing and the lasting effects, in cases where the destruction is great enough to leave distinct results of the lasting sort. In cases of small destruction, or even extended destruction if confined to one hemisphere, the absence of any lasting effects that can be traced leaves no doubt, as Flourens long ago maintained, that the uninjured homogeneous parts can, to a certain degree, take on the functions of the parts destroyed; though it need not therefore be supposed that the smallest part is really superfluous. The main position of Flourens thus remains unshaken by all the experiments of Hitzig and his followers. These only show that after destruction of particular areas of the brain-cortex certain phenomena of stimulation may be manifested, which have partly the character of inhibitory processes. It may be supposed that in each case a different group of nervous tracks is affected, whence the difference of result; and this whether it be by a pathological or a physiological stimulus that the effect is produced from the particular place. So much may be granted without giving in to the fancy of circumscribed cortical centres.

EDITOR.

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#### THE RELATION OF PUNISHMENT TO TEMPTATION.

What ought to be the relation of punishment to temptation? It would be easy to represent the Utilitarian and the Intuitionist as being directly at issue on this question. Rather, perhaps, we should say that the issue is between those who do and those who do not accept the Preventive Theory of Punishment. The Preventive Theory, namely, that the only right end and measure of punishment is the prevention of wrong-doing, may be, and has been, accepted by moralists who do not accept the Utilitarian doctrine. But the Utilitarian can give a peculiar definiteness to the theory by substituting "the prevention of pain" for "the prevention of wrong-doing". This gives him a certain advantage, for unless it will bear some such interpretation the theory seems incomplete. When we have decided that a particular

form of wrong-doing ought to be punished, it may tell us how much punishment should be inflicted ; but it cannot tell us whether or no a particular form of wrong-doing is to be punished at all, for we can scarcely maintain that the state should punish all forms of wrong-doing. The upholder of the Preventive Theory who is not a Utilitarian has to compare things heterogeneous, pain and wrong-doing ; the Utilitarian has to compare pain with pain. Thus we may take the Utilitarian interpretation of the Preventive Theory as the most clearly defined and the best for the purposes of this Note, premising only that what we have to say of this interpretation should be true to a great extent of the Preventive Theory, whatever meaning be given to the phrase 'wrong-doing'.

Now, it seems a legitimate consequence of this theory, that the greater the temptation the greater should be the punishment. Against great temptation you must provide a heavy penal counterpoise. On the other hand, Common Sense requires that the greater the temptation the less should be the punishment. "If all that you want of criminal law is the prevention of crime by the direct fear of punishment, the fact that the temptation is strong is a reason why punishment should be severe. In some instances this is actually the case.

But in most cases the strength of the temptation operates in mitigation of punishment." (Sir J. F. Stephen, *Liberty, Equality, and Fraternity*, 1st ed., p. 151.) Here we have apparently a glaring discrepancy between Utilitarianism and Common Sense. But it is soon seen that the discrepancy is not so great as it appears at first sight. When we hear the Utilitarian doctrine, we are at first inclined to compare the killing of a burglar with the killing of an inoffensive visitor. The man who kills a burglar is greatly tempted, but should be at most very lightly punished. But here the facts which constitute the temptation are facts which greatly diminish the evils usually consequent on an act of homicide. It is hard to frame cases which shall serve for a real test of our instinctive morality, for this among other reasons, that the facts constituting the temptation are usually facts which have some effect in decreasing the pain occasioned by the offence. Still, even when this is explained the Preventive Theory remains unacceptable. Great temptation, Common Sense insists, is in itself a reason for mitigating punishment.

Some agreement may perhaps be come to if we consider what is meant when we say that one man is more tempted than another. When we say that A and B have both done wrong, but that A was more tempted than B, we apparently mean,

- (1) That A's character was such that in ordinary circumstances, or in similar circumstances, he was more likely to commit the crime than was B ; or
- (2) That A was placed in circumstances in which the ordinary or average man would be more likely to commit the crime than he would be if placed in B's circumstances ; or
- (3) That both these propositions are true.

Perhaps we more often refer to a difference in circumstances than to

a difference in characters when we speak of two persons as subject to different degrees of temptation ; but I think that any one of these three propositions might fairly be implied in the statement that A was more tempted than B. We shall be understood when for brevity's sake we speak of the internal and external factors of temptation.

Now, let us place ourselves in the legislator's position, and this is the point from which the subject has usually been surveyed by the Utilitarian. We will suppose, not that we are dealing with one community and two crimes, but with two communities and one crime ; the case is fairer because therein we may more easily assume that temptation is the one variable. It seems to me that whether we suppose the difference between the two communities to consist in (1) the external inducements for the commission of the crime, or (2) the character of the inhabitants, we naturally determine that the punishment must be greater where the temptation is greater. In fact, when once we say that temptation consists of (1) facilities for the commission of crime, or (2) tendency to commit crime, the question seems to decide itself. There would, perhaps, be exceptions. In one country so great might be the temptation that it would be impossible to prevent the crime save by punishments which would be (in Bentham's phrase) "too expensive" ; and we should have to leave it unpunished. Or, again, we might in such a case introduce a small and, for the purposes of immediate prevention, quite inadequate punishment, in the hope of thereby forming a sounder public opinion. But such cases can hardly occur save where the legislator and his subjects belong to different stages of civilisation, and the general rule seems clear and acceptable to Common Sense,—the greater the temptation the greater the punishment.

Even the exception to which we have referred raises, I think, no difference of opinion. It does seem strange to Common Sense that as temptation increases we should go on increasing punishment up to a certain point, and that beyond that point we should cease punishing altogether. But still we see the cogency of the argument, "If you are to punish at all, you must punish very severely or you will do no good," and it would, I think, be generally admitted that this argument supplies the reason why certain forms of vice go unpunished. But this leads us away from our proper topic. We are, I think, agreed on the general rule that from the legislator's point of view the greater the temptation the greater the punishment.

Next let us place ourselves in the position of a judge, and this is the point from which the subject is usually surveyed by the opponents of Utilitarianism. Here the distinction between the internal and external factors is important. That the criminal's character is one particularly prone to evil is plainly a reason for punishing him severely. If between two criminals the sole difference known to the judge is that the one has been previously convicted, the other not, there can be no doubt what effect this difference would have upon the sentences passed. Yet the habitual criminal is one who has conclusively proved that he is a much tempted man by braving repeated

punishments. But it is when the difference is in the external factor that the difficulty occurs. Here we are inclined to say decidedly, great temptation little punishment. A man steals a loaf; shall it not operate in his favour that he was starving? But we must be careful, for cases about rich men and poor men are seldom perfectly fair tests. A rich man has generally greater influence than a poor man. Unpunished wickedness in high places has a singularly bad effect on the community. Besides, it may be noted that in some cases a rich man would probably be less punished than a poor man. A petty theft committed by a poor man may argue a more mischievous disposition than the same act committed by a rich man. However, if we try to exclude all other differences save differences in temptation, our natural decision is still, the greater the temptation the less the punishment. A man has been bribed to commit a crime; if the quantum of the bribe has any effect on our sentence, what effect should it be? We say, I think, the greater the bribe the less the punishment. Not, perhaps, in all cases, for the very smallness of the bribe may show that it did not afford the only motive for the crime, and we may infer a still more dangerous motive than the desire for money, *e.g.*, malevolence or the like. And the case is hardly fair for another reason, namely, because the greatness of the bribe may lead us to believe that there are few people able to pay for the commission of the crime. But take another case. Two men have joined in a crime; the one was bribed by £10, the other by £1000. I think we do consider the most tempted to be the least punishable; and for this reason, namely, that we infer that the dearly-bought man might not have done the crime for a smaller bribe, and this being so, we hold that he is the less mischievous character of the two. We must, then, apparently, admit that from the judge's point of view the greater the (external) temptation the less should be the punishment.

But in speaking of the judge's point of view, I have assumed what in any legal system that we need consider must to a great degree be the case, namely, that the judge's sentence lays down no binding general rule for future cases. If for a moment we imagine that the judge trying a criminal case can by his sentence powerfully influence the sentences to be given in future cases, all seems changed. We might think a judge right in saying, "You, A, have been tempted by an overwhelming bribe, and this will mitigate your punishment"; but I am sure that we should think him wrong if he added, "For the future the rule of this Court will be, the greater the bribe the lighter the punishment of the person bribed." Indeed we should wish him to say just the reverse,—great bribe great punishment. And even as it is there are, I think, cases in which we should expect that a mere increase in the external facilities for crime would induce a judge to increase the severity of his sentences. Suppose a great fire burned one of our large cities and placed a large amount of property within the power of thieves, we should hope that little mercy would be shown to the first man caught stealing, and that the judge who tried him would pass a heavier sentence than is usual in cases of theft. If

a new source of temptation is opened up, an exemplary punishment must be inflicted ; so that even from the judge's standpoint we cannot always say that temptation should operate in mitigation of punishment.

What, then, is the difference between the position of the legislator and the position of a judge ? The object of the one is to prevent people in general from offending. The object of the other is partly to prevent people in general from offending, partly to prevent in particular the convicted criminal from offending. Now, this latter object must be of great importance in the judge's eyes. He has a person before him who has shown that he in particular requires to be prevented from crime. The judge has to weigh two considerations which tend in opposite directions:—(1) Here is a man who has been greatly tempted ; if I punish severely, people in general may be restrained from yielding to great temptations by the thought that heavy punishment is given in such cases. (2) Here is a man who has been greatly tempted ; it is improbable that he will again be exposed to temptation so great, and I have no reason to believe that he will yield to any less. In most cases it seems to me that the considerations of the latter kind will prevail, because the effect of a particular sentence as an example or a precedent will be very small ; but in some cases, such as that above mentioned, when a new temptation has come into play and affects others besides the criminal, the case will be otherwise and the sentence heavy.

On the whole, I submit that the following conclusions are agreeable to Common Sense Morality and justified by the Preventive Theory:—

- (1) In the making of general laws, other things being equal, great temptation is (whether we speak of the internal or of the external factor) a reason for heavy punishment.
- (2) In passing sentence on particular criminals, other things being equal, great temptation is,
  - (a) When we refer to character, not circumstances, a reason for heavy punishment;
  - (b) When we refer to circumstances, not character, a reason for
    - (a) Light punishment, in so far as we believe that the criminal requires only light punishment to prevent him from offending again ;
    - (b) Heavy punishment, in so far as we believe that our awarding a heavy punishment will operate in future as a counterpoise to great temptations.

I am very far from arguing that our instinctive notions about crime and punishment can always be squared with the Preventive Theory. We see plainly that Preventivists may differ widely among themselves ; witness the opinions of Bentham and Paley on the Criminal Law of their own time. But I doubt whether there be really any difference of principle between the Preventive Theory and Common Sense as to relation between temptation and punishment ; and this may, I think, be shown if we are careful (1) to choose as our tests of Common Sense cases in which the facts constituting the temptation

have small influence on the direct harm done (or pain given) by the criminal act ; (2) to distinguish between what I have called the internal and external factors of temptation ; (3) to distinguish between the position of a legislator and the position of a judge. With regard to this last distinction, it may seem strange that the same facts should be to one man a reason for increasing, to another a reason for decreasing punishment. But really the facts are not the same. A moralist who is deciding what ought to be done to a person who has actually done wrong has before him facts which are on the Preventive Theory of much importance, but which are unknown to the moralist who is laying down general rules for the future. It is just because these facts are of great importance that we think it well to leave the amount of punishment to be given in each case as a matter, within certain wide limits, for the judge's discretion.

F. W. MAITLAND.

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DR. BAIN ON FREE WILL.

IN April, 1874—during the course of a philosophical series with which I am still engaged in the *Dublin Review*—I came upon the question of Free Will. My direct assault was upon Mr. Stuart Mill and Dr. Bain, who are far the ablest advocates of Determinism with whom I happen to be acquainted. Dr. Bain did me the honour of replying in the Third Edition of his very instructive work on *The Emotions and the Will*. I rejoined in April and October of last year, and he has rejoined on my rejoinder in the January number of *MIND*.

In April last—while cordially acknowledging that Dr. Bain had treated me with most abundant courtesy—I was nevertheless obliged to complain that throughout his criticism he did not so much as once refer to that central and fundamental argument on which I avowedly based my whole case. Yet, as I added, nothing could well have been more express and emphatic than my detailed exposition of that argument. On the present occasion I must repeat the same acknowledgment and the same complaint. No one can write more handsomely of an opponent than he writes of me. He even says that “I have bestowed more attention on the controversy concerning Free Will, than any one with whom he is acquainted”. Moreover, the extracts he gives from my articles are evidently chosen with the view of exhibiting my position in the most fair and equitable light. And yet by some (as it were) fatality which I am quite unable to explain, he entirely ignores from first to last the precise point on which I lay stress. I have nothing left for it then, except to content myself with stating that point once more ; nor shall I hesitate often to repeat the very words I have used in the *Dublin Review*. Indeed I shall be very glad to take this course ; because my present audience is entirely different from that which I addressed in the Catholic periodical just named. On the other hand it is a considerable inconvenience to me that I am confined within somewhat narrow limits. It would have been unconscionable, however, to ask the Editor for a much longer space in defence than

Dr. Bain has occupied in attack. And at last I shall not improbably have a future opportunity for supplying any defect which may be inevitable in my present Note.

I will observe preliminarily, that Dr. Bain takes up far less confident ground than I had always understood Determinists to assume. I had always understood Determinists to allege, that their doctrine is certain and impregnably established. To this I answered (as Dr. Bain now quotes me) that "no Determinist with whom I happen to be acquainted had even so much as attempted to prove this," though so many have asserted it. Dr. Bain, after citing my statement, does not profess to deny it. He merely says that great *presumption* in favour of Determinism arises from the fact that "uniformity is found to be the rule of nature" in all unambiguous cases. His "present argument," he afterwards adds, "merely requires that there should be a *possible alternative* to the supposition that the will is not subject to the law of uniformity. So long as there is no *unequivocal instance* on" my "side, such an explanation," he says, "deserves to be *listened to*."

For the opposite doctrine, however, I claim, not probability, but certainty. I maintain that there are *many* "unequivocal instances" which conclusively disprove Determinism. Dr. Bain says that "if there be exceptions to the uniformity of nature, they ought ere now to have come into view in some unmistakable cases." I reply that there are not "some" only but very many "unmistakable cases," which peremptorily establish that certain actions of the human will are signal and conspicuous "exceptions" to that "law of uniformity" which prevails generally in nature. And I proceed to place before my present readers some of the arguments which I have elsewhere adduced in behalf of this conclusion.

Dr. Bain protests against the term "Free Will"; and "sees no chance of a reconciliation of the opposing views, until this term is abandoned." He ought then to look with more favour on my own controversial standpoint than on that of some other opponents; because—though I certainly cannot abandon the term "Free Will"—still I have gone through the more essential and fundamental part of my reasoning, before I arrive at that term. I begin by merely maintaining a doctrine called by me "Indeterminism"; which is neither more nor less than the negative doctrine, that the doctrine of Determinism is untrue.

Now what is the doctrine of Determinism? Dr. Bain quotes with entire assent my own virtual exposition thereof. According to Determinists—it holds quite universally that, "given certain physical and corporeal antecedents, one definite group of physical consequents infallibly and inevitably ensue". This is what Indeterminists deny, as regards certain movements of the human will. In order, however, more conveniently to discuss the question, let me take a particular case. Let me suppose that at some given moment two mutually different courses of action are open to you, and that you have to choose between them. Let me further put aside the more common case, that there is a *complication* of motives soliciting you on one side or on

both. Let me suppose that there is one strong motive attracting you in one direction and another in the other, while all other motives on either side are so comparatively weak that they may be left out of account.<sup>1</sup> I will first confine myself to such a particular case as this; because all controversialists will admit, that it is especially fitted for bringing the question to a definite issue.

Such a case then being supposed, Dr. Bain considers it to be experientially known which of these two motives is "the stronger," by the very fact that it carries the day. "Two powers are in conflict, and the result shows their relative force." The successful motive "exercises control, not by freedom of the will, but by the psychological power of the stronger". If antecedents were to recur in every respect precisely similar, the result would infallibly and inevitably be the same. According to Determinists, that motive which under present circumstances is the stronger, under precisely similar circumstances would again be the stronger. Moreover, according to Determinists, the stronger motive infallibly and inevitably prevails over the weaker. I am confident that all Determinists will endorse this statement of their thesis as undeniably fair and accurate. And it is against their thesis as so stated, that my reasoning has been directed.

Now many Libertarians deny that there is any intelligible sense in the affirmation, that one motive is "stronger" than another. For my own part, however, I submit that there may be a most intelligible meaning in the affirmation; and that the term, if so understood, is a very serviceable one. So far I am in agreement with Dr. Bain. I differ from him, however, in the sense which I give to this term. When he says that at this moment motive A is "stronger" with you than motive B,—he merely means that as a matter of fact you give preference in action to the former over the latter. But when on my side I say that motive A is "stronger" at this moment with you than motive B,—I mean that the *spontaneous impulse*—the direct *tendency*—of your will at this moment is towards acting on the former in preference to the latter. According to my terminology, then, it is not the will's *action*, but its *spontaneous impulse*, which evinces the relative "strength" of motives. And then, as an Indeterminist, I proceed to maintain a second proposition—viz., that by no means unfrequently you *act in opposition* to your spontaneous impulse, to your strongest motive. The first of my two propositions, it will be seen, is purely verbal; but the second is most substantial. And I will proceed at once to adduce various correlated practical instances to illustrate both these propositions. I will follow Dr. Bain's precedent, and take my examples from the sports of the field.

<sup>1</sup> In my articles I have distinguished between two different ideas which are commonly expressed by this word "motive". And I think indeed that this distinction is of much importance in the *exposition* of what I account sound doctrine. But in arguing with an opponent, it may be more convenient to waive this distinction. Here, therefore, I will use the word "motive" to express any thought which in any way prompts the will to act in any given direction.

A long frost has at last broken up, and you are looking forward with keenest hope to your day's hunting. Your post, however, comes in early; and you receive a letter just as you have donned your red coat and are sitting down to breakfast. This letter announces that you must set off on this very morning for London, if you are to be present at some occasion on which your presence will be vitally important, for an end which you account of extreme public moment. Let me consider the different ways in which your conduct may imaginably be affected, and the light thus thrown on the relative strength of your motives.

Perhaps (1) the public end, for which your presence is so urgently needed, happens to be one in which you are so keenly interested, which so intimately affects your feelings, that your balance of emotion is intensely in favour of your going. This motive, then, is indefinitely "stronger" than its antagonist. You at once order your carriage, as the railway station is some four miles off; and you are delighted to start as soon as your carriage comes round. Perhaps (2) the balance of your *emotion* on the contrary is quite decidedly in favour of the day's hunting: because the public end—though intellectually you appreciate its exceptional importance—is not one with which your character leads you *emotionally* to sympathise. Nevertheless, through a long course of public-spirited action, and through "stored up memories of the past"—you have acquired the *habit* of postponing pleasure to the call of duty. Here, therefore, just as in the former case, there is not a moment's vacillation or hesitation: your spontaneous impulse is quite urgently in favour of going. Your balance of *emotion*, I repeat, is in favour of staying in the country to hunt. But good habit by its intrinsic strength spontaneously prevails over emotion; and (taking your nature and circumstances as a whole) the motive which prompts you to go is indefinitely stronger than that which prompts you to stay. Or (3) perhaps, when you have read the letter, your will is brought into a state of vacillation and vibration. Your emotional impulse is one moment in one direction, and the next moment in another. Then—as you possess no firm *habit* of public spirit—you take a long time in making up your mind. As Dr. Bain would say—and as I equally should say—the strength of your motives is very evenly balanced, whichever may happen finally to show itself stably the stronger. Lastly (4) you have perhaps very little public spirit, and are passionately fond of hunting. So you at once toss your letter into the fire: and do not even entertain the question whether you shall offer up your day's sport as a sacrifice to your country's welfare. In this case of course the motive which prompts you to stay is indefinitely stronger than that which prompts you to go.

Now all these four alternatives are contemplated by the Determinist, and square most easily with his theory. In each case your conduct is determined by your strongest present motive. But there is a fifth case which he does not—and consistently with his theory cannot—admit to be a possible one; but in regard to which I confidently main-

tain, by appeal to experience, that it is abundantly possible, and by no means indeed unfrequent. It is most possible, I say, that you put forth on the occasion what I have called in my articles "anti-impulsive effort"; that you act resolutely and consistently in *opposition* to your spontaneous impulse; in opposition to that which at the moment is your strongest motive. Thus—On one side the spontaneous impulse of your will is quite decidedly in favour of staying to hunt; and the motive therefore which prompts you to do so is quite decidedly stronger at the moment, than that which would draw you to London. On the other hand your reason recognises clearly how very important is the public interest at issue, and how plainly duty calls you in the latter direction. You clench your teeth, therefore, and resolutely set yourself to *resist* the spontaneous impulse of your will. You resolutely doff your hunting dress; you resolutely order your carriage which shall take you to the station; you resolutely enter it when it comes round. And now let me follow your course during the four miles' transit which ensues. During the greater part—perhaps during the whole—of this transit, there proceeds what I have called in my articles "a compound phenomenon"; or, in other words, there co-exist in your mind two mutually distinct phenomena. First phenomenon. Your will's preponderating spontaneous impulse is stably set in one given direction. You remember that even now it is by no means too late to be present at the meet; you are restless and ill at ease; you are most urgently solicited by inclination to order your coachman home again. So urgent, indeed, is this solicitation—so much stronger is the motive which prompts you to return than that which prompts you to continue your course—that, unless you exercised unintermitting self-resistance, self-government, self-control, you would quite infallibly give the coachman such an order. Here is the first phenomenon to which I call attention: your will's spontaneous impulse towards returning. A second, no less distinctly pronounced and strongly marked, phenomenon is that unintermitting self-resistance, self-government, self-control, of which I have been speaking. On one side is that phenomenon, which I call your will's predominant spontaneous *impulse* or *desire*; on the other side that which I call your firm and sustained antagonistic *resolve*. On one side is the strongest motive, the spontaneous impulse, the predominant desire; on the other side is that which I call anti-impulsive effort and effectual resolve.

Here, then, I come to the point of my argument. How has this spontaneous impulse or desire been generated? Dr. Bain must surely answer this question as I do. He must say that your spontaneous impulse of the moment is the inevitable and infallible outcome of your circumstances (external and internal) as they *exist* at this moment. What other account of its genesis could possibly be given? We may know then quite certainly what is the resultant at this moment of the motives which solicit your will, by knowing what is the spontaneous *impulse* of your will at this moment. Yet in such a case as I have supposed, it is a plain matter of fact, that you are *not* acting in accordance with your spontaneous impulse. Or (in other words) it is a plain

matter of fact, that you are *not* doing that to which your circumstances of the moment dispose you. But Determinists say that you must *always* infallibly and inevitably do that to which your circumstances of the moment dispose you. Therefore Determinists are fundamentally mistaken.

It is this "compound phenomenon," as I have called it—the like of which are surely very far from unfrequent—on which I have throughout mainly rested my argument. And I have now described it almost in the very words used by me last October. Dr. Bain says that the phenomenon which I describe "is no new phenomenon in human experience," and so far of course I am zealously at one with him. But he adds that this phenomenon "is spoken of in every account of the constitution of the mind". Now Dr. Bain has himself written a most able "account of the constitution of the mind". I have read with great attention, and (I hope) with great instruction, that portion of his labours which treats "the Emotions and the Will". But I protest that I cannot find in any part of that volume any recognition whatever of such facts as that on which I have been laying stress. It would interest me extremely if he, or some one of his many sympathisers, would refer me to the page—say in the Third Edition—where I shall find such facts (1) recognised, and (2) explained in some way different from mine.

At this stage of my argument, I proceed from the general doctrine of Indeterminism to the special doctrine of Free Will. Once more I beg my readers' attention to those two phenomena on which I lay stress. I draw attention to them as they co-exist, *e.g.*, in the country gentleman, who has left his day's hunting very much against the grain, from a motive of public duty, and who is in his carriage *en route* to the station. On one side is his greatly preponderating spontaneous impulse towards returning; on the other is anti-impulsive effort, successfully *contending* against that impulse. If we examine these two phenomena successively with due care, we shall see that they differ from each other in character not less than fundamentally. In experiencing the former of them, his will has been entirely passive: in eliciting the latter, it is intensely active. He is not only conscious (I say) that he *elicits* this act of resistance: he is no one whit less directly conscious, that he elicits it *by his own active exertion*. No doubt motives differ from each other indefinitely as regards their relative "strength"; that is, as regards the influence which they respectively exercise on the will's spontaneous impulse or passive tendency. Still the agent is not *left at their mercy*, if I may so express myself. His will possesses intrinsic strength of its own, whereby on occasion it can choose to act on a motive which is for the moment weaker, rather than on one which is for the moment stronger. This fact, I say, is impressed most unmistakably on his knowledge, by such an experience as I have described. His soul—such is the fact which he recognises—has on certain occasions the power of *redressing the balance* of motives, by throwing its own self-originated force<sup>1</sup> into this or that scale. And this is precisely an exercise of Free Will.

<sup>1</sup> Let no Theist misunderstand this term "self-originated" force. I ex-

Hitherto I have so spoken as to embrace those instances only, in which (1) no more than two alternatives are presented ; and in which (2) only one motive for either alternative needs to be considered. But I can easily express my argument in a much more general form. I can so express it as to include those far more frequent cases, in which (1) there are various courses of action from which a choice may be made ; and in which (2) multifarious motives are at work, soliciting the agent in several different directions. Far oftener than not, he can know with absolute certainty what is the exact *resultant* of these various motives ; what is the exact direction in which their combined influence solicits him. He can know this at once, I say, with certainty ; because he can recognise quite unmistakably what at the moment is his will's spontaneous impulse or desire—its passive tendency. This spontaneous impulse or passive tendency measures of course with infallible accuracy the preponderating influence exercised over his mind, by that complex of motives which for the moment is combinedly at work. But he knows also by actual experience, that on certain occasions he puts forth a vigorous self-originated effort, whereby he compels himself to act in some way entirely *different* from that prompted by his will's spontaneous impulse and passive tendency. On such occasions then he knows by experience that he compels himself, by a self-originated and vigorous effort, to act in some way entirely different from that, towards which his balance of motives at the moment prompts him. But Determinists will be the first to admit, that such self-originated resistance to the balance of motives—if it existed—would be an exercise of Free Will.

I am greatly disappointed that my limits do not permit me to continue further the exposition of my argument, as it is contained in the *Dublin Review*. In particular, I should have wished to illustrate in some detail the broad phenomenal contrast which exists between two classes of acts, which I have called respectively acts of "anti-impulsive" and "congenial" efforts. By "effort" I mean "resistance to desire". By "congenial effort" I mean "resistance to some (at the moment) weaker desire or weaker motive ; in order to the gratification of some (at the moment) stronger desire or stronger motive". By "anti-impulsive" effort I mean "resistance offered by self-originated exertion of the will to what (at the moment) is the agent's strongest desire or motive". Now, Determinists hold that a weaker desire indeed will be overcome by a stronger ; but they add that the strongest present *desire* cannot possibly be overcome by the will's self-originated *resolve*. They must maintain therefore, of course, that no such acts are possible as those of "anti-impulsive" effort. They maintain that all effort of the will is really what I call "congenial," and consists merely in crushing a weaker desire under influence of a stronger. I have argued in the *Dublin Review* that this affirmation is in direct contradiction to manifest mental facts ; that what I call "anti-impulsive efforts" present the

plained clearly last April the sense in which a Theist may most consistently use it.

broadest possible phenomenal contrast to those efforts which I call "congenial". But I could not do any kind of justice to this argument, unless I exhibited various individual illustrations of my statement. And for this I have here no room.

As I have already implied, Dr. Bain really offers no reply whatever to the argument I have now set forth. He does not even exhibit it, much less reply to it. The nearest approach I can find to any recognition of it, is his reference to "stored up memories of the past" as influencing human action. No doubt they do so most importantly. But in what manner do they influence it? Dr. Bain himself must reply, by modifying the will's *spontaneous impulse*; by effecting that such impulse shall be in this direction rather than in that. Yet if this be so, how can these "stored up memories" tend ever so remotely to account for a man *resisting* his spontaneous impulse? I am here but repeating what has been said by an able and most kind critic in the *Spectator* of Jan. 10th. But I must add that the fact of Dr. Bain suggesting such an answer is the best of all possible proofs, how little he has given his mind to the point of my argument.

What he has really done is—not to answer my *reasoning* at all—but to allege various objections against the *conclusion* to which my argument points. These I will now briefly consider.

1. He complains "that he cannot grasp clearly what Free Will means". Well—I answered this question at some little length last April, and Dr. Bain has not yet explained which of my statements are to him unintelligible. Here, however, I may briefly give an answer which I think is substantially accurate, founded on my preceding remarks in this Note. If an agent at any given moment has a real power of successfully resisting his will's spontaneous impulse and passive tendency,—at such moment his will is free. If he exercises the said power, he exercises Free Will. Nay, if he *refuses* to exercise it—nevertheless his will may at the moment be free; because he *can* exercise this power if he chooses, and he has full power (within certain limits) so to choose.

2. Dr. Bain "would like to have the region of failure of uniformity closely circumscribed". In other words (as I understand him) he wishes to know how often in the day, on what occasions, under what conditions, I maintain that a man's will is free. I briefly entered on this subject at the end of my article of last April, and expressed a hope of treating it fully hereafter. I fancy that Libertarians would considerably differ from each other in their answer to this question; which, however, has really no bearing on the essential point at issue between Theists and Antitheists. My own humble view is, that a man's will is free during pretty nearly the whole of his waking life.

3. Dr. Bain implies a wish to understand how such a science as psychology can possibly exist, if so many psychical phenomena are external to the sphere of uniform phenomenal sequence. I admit heartily that this is an inquiry which Libertarians are bound expressly and intelligibly to confront. For my own part I did confront it, in an article on "Science, Prayer, Free Will, and Miracles," published by me

in the *Dublin Review* as far back as 1867. I shall have great pleasure in forwarding Dr. Bain a copy of that article. At the same time it may be as well here to point out one obvious fact. The "spontaneous impulse" or "passive tendency" of any given man's will, at any given moment, is a matter open to scientific calculation in the strictest sense. This particular phenomenon at all events is infallibly and inevitably determined by phenomenal antecedents. In fact (as I said last October) I think that psychologists have been unduly remiss in not labouring more actively towards the exploration of this phenomenon. Consider—as one instance out of many—the mutual relations of emotion and habit. Under what circumstances does emotion spontaneously prevail over habit? Conversely, under what circumstances does habit spontaneously prevail over emotion? How very little has yet been done (so far as I happen to be aware) towards elucidating this question!

4. Dr. Bain especially desires to know, how Libertarians stand with regard to the doctrine of *causation*. He asks, *e.g.*, whether, according to Libertarians, "from the occurrence of a given antecedent, we can conclude what the consequent will be". Surely he must be well aware, that every Libertarian answers this question emphatically in the negative. In any given instance of free action, the elicited act of will is not infallibly determined by its phenomenal antecedents, but on the contrary is elicited by the agent according to his own unfettered choice. This is just what we *mean* when we say that the action is free.

"Can there then be such a phenomenon"—Determinists ask—"as a *causeless* volition?" In my article of last April I treated this matter in detail. The difficulty raised I understand to be this, though I am expressing it in my own words. "It is a truth accepted by the common sense of mankind, that every event has a cause. In fact this is the very truth which we call the 'doctrine of causation'. But by a 'cause' is meant a phenomenal antecedent, from which the 'effect' ensues in the way of uniform phenomenal sequence. Now there are certain acts of the will, in regard to which Libertarians deny that such acts do proceed from phenomenal antecedents in the way of uniform phenomenal sequence. Therefore Libertarians deny that 'doctrine of causation,' which is accepted by the common sense of mankind."

It has always amazed me that Determinists can see any force in this objection. I am the last to deny that many of their arguments are extremely plausible, and demand most careful consideration. But this particular argument has its origin in a perfectly marvellous confusion of thought. Intuitionists entirely deny—as is surely quite notorious—that the word 'cause' has (in the accepted doctrine of causation) the sense which a Determinist supposes. They entirely deny that the common sense of mankind accepts the 'doctrine of causation' in the sense in which a Determinist understands it. They entirely deny that in that sense the doctrine is true. They confidently affirm that in that sense the doctrine is false. Yet even so unusually able and thoughtful a writer as Mr. Leslie Stephen, has fallen a victim to the fallacy of which I am speaking. He represents Libertarian Theists as holding that "we are bound by a necessary law of thought to believe in uni-

versal causation"; and so far he represents them truly. But he proceeds to represent them as "saying that another necessary law of thought tells us that causation is not universal," because that man's will is free.<sup>1</sup> On the contrary, Libertarians are removed in the furthest possible degree from admitting that a free human act involves a "causeless volition". They say that such an act exemplifies the doctrine of causation more expressly, more emphatically, more clamourously, than does any other phenomenon in the world. All this I set forth to the best of my power last April; and Dr. Bain—according to his wont—has referred to my argument without attempting to answer it.

5. At last, I think that Dr. Bain lays his chief stress on the fact, that all *other* phenomena proceed by uniformity of sequence. He regards it as in the very highest degree improbable that one particular class of phenomena—viz., human volitions—should be an exception to this otherwise universal rule. But he makes no way whatever in controversy, by merely pointing out that according to *his own* theory of life, such exceptionality is most improbable: he has to show (if he can) that it is improbable according to *his opponent's* theory of life. Now, according to his opponent's theory of life, such an exceptionality is not only not an improbability, it is an absolute necessity. There can be no such thing as Theistic morality without Free Will. On the other hand, if you *deny* Theistic morality—then (I quite admit) Free Will would be an uncouth, unmeaning, portentous exception to the otherwise universal course of nature. In fact, I may turn the tables on Dr. Bain. Unless Theistic morality be sound doctrine, Free Will is a portentous and unintelligible anomaly. But (as I trust I have shown) Free Will indubitably exists. Dr. Bain, therefore, either must admit that there exists what he himself would describe as a portentous and unintelligible anomaly, or else he must admit that Theistic morality is sound doctrine.

W. G. WARD.

#### VII.—CRITICAL NOTICES.

*An Inquiry into the Process of Human Experience: attempting to set forth its lower Laws, with some hints as to the higher Phenomena of Consciousness.* By WILLIAM CYPLES. London: Strahan & Co., 1880. Pp. 806.

As the title suggests, this voluminous work aims at supplying a complete scheme of philosophical doctrine. Beginning with an account of the facts of empirical psychology as studied and observed in the light of recent physiological research, the writer gradually advances to the discussion of the questions of the ultimate nature of Consciousness, the existence of a soul or spiritual entity, the relation of the phenomena of the higher moral consciousness to religious doctrine, together with the more practical problems of philosophy such as the

<sup>1</sup> *Fortnightly Review*, June 1876, p. 818, "An Agnostic's Apology".

ends of conduct, the nature and uses of evil, and the function and laws of art. Throughout the author shows a striking degree of originality both in conception and in mode of presentation. Mr. Cyples has evidently read much, but he has pondered far more. Thus though he again and again acknowledges his obligations to English thinkers, more especially Professor Bain, Mr. Herbert Spencer, and Mr. G. H. Lewes, the reader will look in vain for any simple reproduction of their ideas.

Originality is bound before all other things to be clear; for new thought as such makes a greater demand on the attention, and cannot be assimilated unless it be presented in a simple well-defined form. I regret to say that the work of Mr. Cyples fails to comply with this requirement. To begin with, although there is a certain method in the exposition, this might be indefinitely improved. At every few pages the author half opens up a new phase of his subject only to tell us that he is not sufficiently advanced to deal with it. There is an amount of backward as well as forward reference which is rather wearisome. In one place a whole set of principles is repeated word for word in the shape of foot-notes.

These facts sufficiently indicate defects in the orderly arrangement of material. But these are trivial when compared with the fundamental fault of indistinctness or inarticulateness from which the author hardly ever escapes. There is a want of definiteness of thought and precision of statement on almost every page. This is partly due to a literary style which is something quite wonderful in its way. Although hitherto philosophy has been commonly regarded as a branch of literature, it is of course open to any one to say that there are advantages in adopting a purely technical phraseology in philosophic writing. But in that case it would seem to be necessary to give a preliminary definition of the symbols to be used. Mr. Cyples appears to delight in piling up new and compound technicalities; but unfortunately the reader looks in vain for clear definitions. What is generally offered in the way of definition is worse than the term itself, as when, on p. 10, organisation is defined as "the interhappening of structural statics with related dynamical activities". The title of the book is typical in its vagueness; and nowhere is there an attempt to define the much-disputed term, Experience. As samples of awkward unintelligibilities in expression I may take the following: "to be actualised egoistically," "these reckonable positionised individuations," "non-metaphoricalised sensation". But to give the reader any conception of the author's manner it would be necessary to quote some of the many huge shapeless sentences, which bristle with verbal asperities of this kind. A good deal of this must be set down to excessive individuality. The writer seems to shun everything familiar and customary in phraseology. 'Motion' is too poor a thing for him so long as it wears this ordinary verbal dress, so he glorifies it by terming it "executive operation". He never speaks of anything so commonplace as a state of consciousness or a mental process; we hear instead of "self-actualisation" or "egoistic awareness". The

words 'mode,' 'form,' 'variety,' are studiously avoided in favour of "style": thus we read of "a style of sentiency," "the style of material causation," and so on. These innovations in phraseology have not even the justification of being picturesque.

Faults of writing are often connected with faults of thinking: and the volume before us seems to illustrate the observation. I have patiently tried to read Mr. Cycles on the assumption that to himself every term and group of terms conveys a precisely defined meaning, but I have failed. In some cases I can get at no meaning at all after repeated readings of a passage: in many more I can only feel sure that I have got an adumbration of an intelligible proposition. Under these circumstances the critic can hardly help concluding that the author does not think clearly, however presumptuous this affirmation may appear to the latter.

Mr. Cycles may think that I am very hard on a few minor failings. A moment's reflection will however tell him that a reader of his ponderous volume would not have felt these faults so keenly if he had not found something to make him persevere with the perusal. It is because there is so much that is new, striking, and stimulative of thought in the book that the critic so keenly regrets its shortcomings. He cannot but feel that in this busy age when it is a difficult business to get people to read philosophy at all, there is little chance of new ideas arousing the attention they deserve if they are not presented in a more attractive shape than that hit upon by Mr. Cycles.

Our author's special aim seems to be to re-examine the results of modern psychological research for the purpose of determining whether the science offers any support to, or allows any opening for, the aspirations and beliefs of the religious mind. In one way it may be called the complement to the well-known recent work of two English physicists. Modern psychology seems to our author to treat these higher phenomena of consciousness with too scant courtesy, and he sets himself to inquire what a thorough-going physiology of mind has to say to the affirmations of the higher moral consciousness as they are to be met with in the confessions of religious men. Here lie at once the interest and the danger of the task Mr. Cycles has undertaken: the interest because the problems opened up are of vital consequence to everybody; the danger because it is so enormously difficult to adhere to a rigorously scientific procedure when the motive is no longer a general interest in truth as such, but a special and supreme interest in a particular group of questions having this unique practical significance. Let us see how the author has accomplished his difficult task.

The volume opens with a general sketch of the physical conditions of consciousness both within and without the organism. While leaning here largely on the well-ascertained results of modern research, Mr. Cycles goes at places considerably in advance of the present stage of incontestable knowledge. Thus by following out and rendering more definite the idea of Mr. G. H. Lewes, that every state of consciousness is compounded of sensory and motor factors, and involves a central grouping of elements, he ingeniously formulates a "Law of

Consciousness" or "Law of Effectiveness," which says that for a conscious sensation there is necessary a "coincidence of movement in the fibres of at least two senses". The second sense is always found in a related motor activity or, as the author chooses to call it, "locomotory-activity" which is "physiologically provided for in respect of each sense-organ". The facts brought forward to prove that there is this combination of activities in every case are interesting, though perhaps hardly sufficient. The writer argues skilfully in the following passage:—

"The allotment of the special sense-organs in the bodily frame—in particular the spreading of the apparatus of touch over nearly the whole external superficies, with the partial extension of it internally, in the mouth, &c.—makes it impracticable for the muscular apparatus (except when acting below the *minimum* fixed by the Law of Effectiveness) to act isolatedly. There are few movements which do not, by contraction of the skin at some point, bring the sense of touch into play. In the very act, too, the muscular operation appeals to the sense of temperature; which, again by causing, or, as we may better say, working contraction and expansion of substance, implicates the muscular sense" (p. 32).

After this general review of conscious operations Mr. Cyples takes up the difficult problem of Pleasure and Pain. The definition of pleasure (pp. 48, 49) is too long to quote. It takes as the basis of pleasurable sensation a specific grouping of nervous activities in a sense corresponding to a definite mode of sensation, as a distinct colour, sound, &c. In other words, pleasure is the result of a uniform mode of stimulation in any sense provided it comes up in intensity and extent to the requirements of the Law of Effectiveness. Such a uniform action is said "to fulfil and cumulate reminiscence". Pain on the other hand has no positive physical conditions: it arises "whenever an established nervous co-ordination—in other words a natural or habitual grouping of fibrils—is in act disintegrated, being reduced within its customary area to a lower numerical activity" (p. 55). It is "a protest which consciousness makes against its own dwindling"; and pain lasts until the co-ordination is either throughout its extent destroyed, or restored, or finally broken up into parts that fall below the limits of the Law of Effectiveness. Painful experience is thus the reversal of pleasurable: it is a disintegration corresponding to a previous integration, "summing up all the reminiscences historically belonging to the nervous co-ordinations interfered with by the injury". The author does not shrink from a rigorous logical carrying out of this reasoning, contending that the pains of pricks, wounds, &c., no more than neutralise the past pleasures obtained through the structures injured, in which, however, must be included not only "the ecstatic thrills bubbling out in the crowings, the triumphant tossings of the baby in the nurse's arms" but the "antique joys" of embryonic life. Mr. Cyples seeks to get over the difficulties in the way of this hypothesis by help of a law of decrease of nervous ratios, by which he appears to mean the effect of habit, though the meaning is not as clear as might be. He clearly sees the "irrationality" of pain in many

instances, that is, the want of a discoverable relation between the degree of pain and the importance of the organ, and infers from this that unless there is blind failure or malignancy in things there has been a catastrophe at some prior stage of the history of man "jarring the happenings of the human experience".

I have given the author's doctrine of pleasure and pain at some length because it is a very good sample of his philosophical "style," if I may adopt his own expression. The student of modern psychology will after a little reflection recognise how very closely it approximates to well-known current views. The bringing out of the element of equality or smoothness in pleasurable stimulation is, I think, important, though this point might easily have been much more precise by help of a reference to Fechner's views. Whether Mr. Cycles is right in resting the pleasurable effects of uniform stimulation on its being so favourable to the satisfaction of expectation, and so to the incorporation of reminiscence into sensation (which is all the meaning I can extract from the phrase "fulfil and cumulate reminiscence") may be doubted. The phenomena of musical discord as elucidated by Helmholtz seem to point to the conclusion that smoothness of action is specially favourable to continued efficiency of structure, whereas abrupt and jerky action is unfavourable. The doctrine of pain, which on the surface curiously resembles that put forward by the late Léon Dumont in his *Théorie scientifique de la Sensibilité*, seems to me a little far-fetched. If all pain involves injury or something approaching to this, why not make this positive fact the basis of the feeling without resorting to the idea that it arises through the mere absence of what is destroyed, and, as it seems, through a consciousness of this loss? Mr. Cycles distinctly tells us that "the fact of the nervous grouping being less than on a prior occasion is somehow recognised" (p. 82). It is plain indeed that our author here wants to make a new mystery of pain. The interesting side of pain to him is that it appears to be a "style" of consciousness "somehow in excess of the lessened physical activity then in use".

What thus appears in the lowest stage of sentiency appears according to our author more plainly as we rise into the complex modes of consciousness. In discussing the intellectual processes of memory, comparison, self-consciousness, &c., to which he now passes he seeks to bring out the fact of a growing detachment of consciousness from direct physical causation as commonly understood. Thus in all comparison of a present with a past impression the Ego shows "a capability of complicating its own phenomena". Self-recognition again, or "self-awareness" is viewed as something altogether apart from physiological conditions, as a process essentially inscrutable and mystical. In the still higher regions of Emotion and Will the spontaneous activity of the Ego comes yet more clearly into view. Mr. Cycles is too scientific to hastily adopt the testimony of consciousness to free-will in view of the great generalisations of modern physical science. So he professes to inquire into the evidences of such a power of self-determination. He finds these revealed most clearly in the

phenomena of the higher moral consciousness, such as aspiration or the internal determination of thought towards good, the overcoming of temptation, and so on. Modestly rejecting the idea that volition can directly affect external movement—though he raises the question whether the common assurance of possessing this power does not point back to the loss of some higher endowment in the infancy of the race—he contends that these moral and spiritual activities may involve the creation of an increment of nervous energy in the higher centres which infinitesimal addition of physical energy may for ever escape the finest standards of measurement of the physicist. All that is needed he says is some further “elaboration of cerebral structure,” which might, he modestly hints, be brought about by the addition of “a single vibration affecting only the centre of the diagram in a single brain-cell”. After this one is not surprised to find the author proceeding with a like semblance of scientific caution to weigh the possibilities of such an increment of energy becoming the germ of an “interior finer organisation,” the activities of which make up the life of the Soul, and of this organisation being acted upon by a direct communication from the Divine Source, and serving as a vehicle for the Soul when it must part company with the grosser organisation of the vile body. Notwithstanding the repeated assurances of the author that his purpose is not to discuss the truth of religious dogma, he here plunges pretty deeply into the mysteries of the Christian faith. And, as might reasonably be expected, the deeper he goes the more vague he becomes. The looseness of his thought appears to me to reach its climax on page 376 where he gives us “a first rough definition” of the Soul after this fashion: “It is the interior, higher, egoistically-obtained organisation of actualising-apparatus always modifiable by the moral conduct of the Ego, but representing potentially its total of reminiscence available for the conditioning and defining of personality,” and so on through a sentence covering the greater part of a page, which might perhaps be best described in the author’s own language, as a masterly instance of “a cumulation of (verbal) reminiscence”.

No psychologist can possibly object to the examination of any class of mental phenomena with a view to see whether they can be accounted for by known causes, and there still remains to be done a good deal of nice work in analysing those more subtle and intricate phenomena of moral and religious aspiration to which Mr. Cyples here calls our attention. Only the examination must be rigorously scientific, and unknown causes must not be called in till it is completely demonstrated that known ones fail to account for the phenomena. Mr. Cyples hardly makes any pretence at this truly scientific method of exhaustion. He is satisfied at finding, as he thinks, fugitive traces and “hints” of a spiritual activity that transcends the effects of physical causation. But the only certain facts that he here lights on avail him but little. It is only the most crass materialist who would say that the “style” of mental life is discoverable in physical events. The fundamental functions of mind, as consciousness of a past or memory, sense of agreement, &c., are *sui generis*, having nothing

analogous in the operations of the physical world. All that a thorough-going and consistent physiological psychology asserts is that to every mental event there corresponds a physical, and that the former varies in certain respects as the latter varies. This is the proposition that Mr. Cycles must upset before he can claim the least scientific character for his new mysticism; and the example of other living quasi-scientific mystics, more especially E. von Hartmann, may perhaps tell him whether this is an easy task.

There is no time to follow Mr. Cycles into his metaphysical proof of the existence of a substance mind in addition to the material substance to which he thinks all scientific men really hold, whether they know it or not. There are some curious speculations here on the attitude of modern science to religious belief, and a confident prediction that the scientific world will be compelled by the laws of the human mind itself to restore the idea of quasi-personality to nature as soon as the complexity of its operations is better apprehended. But the reader has possibly had enough of bold speculations and would rather hear of the less ambitious parts of the book. As I have said, it abounds in striking suggestions, and after so much adverse criticism I feel bound to call attention again to the genuinely scientific element of the book. Unfortunately this appears in so fragmentary a fashion that it is hardly possible to give a good example. The discussion of the mechanism of memory and attention, for example, though including some fanciful physiological hypotheses, is on the whole very instructive. Again the elucidation of the part taken by movement and motor impulse in intellectual operations generally, more particularly by help of the "language faculty," is a valuable extension of the well-known views of Mr. Bain and Mr. Lewes. In the handling of moral and practical questions, too, Mr. Cycles is often very successful, as when he mediates between Hedonism and Asceticism by pointing out that conduct has so much to do with the prevention of pain, that practically the pursuit of pleasure is the wrong rule of life. The grave problem of Evil is skilfully touched on too, if with a too apparent leaning to optimism (as one might expect from the doctrine of pain and the general drift of the book), and without an adequate apprehension of the point and stress of modern Pessimism, which is rather troubled with the evils of a highly civilised social state than with those of primitive life, which the author here ingeniously shows to have been sentimentally exaggerated. Of all the chapters of the volume those on the *Æsthetic Emotions and Art* (cc. x. and xxi.) appear to me to be best. Here where mysticism is apt to ride rampant Mr. Cycles is, oddly enough, sober and lucid. Though his views are not radically new, his working out of psychological principles into the form of laws of the beautiful is very well performed. Beauty is conceived as a perfected form of pleasure in which elements of pain are reduced to a minimum by being kept below the threshold of effectiveness. And, true alike to the tradition of the British school of æsthetics and to his fundamental conception of consciousness as the result of aggregation, he finds the essential

feature of lofty beauty in mass of pleasurable sensation together with volume of grateful reminiscence. Whether Mr. Cyples does not make too much of mere mass of consciousness and range of reminiscence, in explaining the aesthetic value of Typical Examples, of the Sublime, of Fitness, &c., may perhaps be doubted. So too I am inclined to think that his attempt to resolve the pleasure of harmony including rhythm into a satisfaction of nascent anticipation is pushed too far to the exclusion of other aspects. Nevertheless in bringing out this element he may be said to have made a valuable addition to aesthetic doctrine.

I have had occasion to remark on the author's cumbrous style. I must now add that he shows himself quite capable of writing clear and effective English when he likes. The chapters on Beauty and Art contain many examples of a really good style, and I cannot do better than close by quoting a specimen from a passage on the relation of the Sublime to the Terrible:—

“A mountain with no scars upon its sides telling of the rage of storms ; no dizzying sheer descents of plunging precipice ; no gulfs ; no inaccessible peaks ; but a mountain showing all gradual, smooth, shining—this would not be sublime in the second of the two senses above specified, no matter what its mere size. To give it sublimity of that kind you must mark it with violence. It needs, here and there, singeing and scarring with traces of the flaming thunderbolt ; fringes of black struggling pines must show dwarfed and painful on the narrow edges of its unsheltering cliffs ; you must hang somewhere amidst its higher snows the fatal avalanche, held only by creaking, faulty chains of ice, &c.” (p. 734).

JAMES SULLY.

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*La Morale anglaise contemporaine.* Morale de l'utilité et de l'évolution. Par M. GUYAU. Ouvrage couronné par l'Académie des Sciences morales et politiques. Paris : Germer Baillière et Cie. 1879. Pp. xii, 417.

The study of the English school of moral philosophy has lately made great progress in France ; and the appearance of such a book as M. Guyau's is one of the most satisfactory assurances of it. A circumstance which adds a special value to M. Guyau's work in this respect is that he is not an adherent of utilitarianism in any form. He has nevertheless thought it worth while to make its doctrines and development from Bentham to Herbert Spencer the subject of a full, careful, and fair-minded discussion. Whether one agrees with his criticism or not on particular points, one feels throughout that M. Guyau is in a region wholly removed from the superficial declamation officially stamped as philosophy in France not so very long ago. The book is divided into two parts, occupied with exposition and criticism respectively. In the first part the theories of English utilitarian moralists are set forth, those of Bentham, J. S. Mill, and Herbert Spencer having the chief place given to them. In the second and larger part their methods and results are criticised, and an alternative view of morality is indicated, but not fully stated. M. Guyau is not an advocate of intuitionism of the old-fashioned kind, but seems to

regard morality as the direction of the will to the working out of an ideal involved in the constitution of the world, and eminently in that of man, and possessing in some way an absolute value. Before going farther it is well to mention that this volume is a sequel to *La Morale d' Épicure*, reviewed by Mr. H. Sidgwick in MIND XVI., p. 582 : it is developed, in fact, from the second part of the essay in its original form.

Almost unqualified praise may be given to M. Guyau's chapters of exposition. His account is lucid, pleasant to read, and accurate : in fact I do not know where else, even in English, so full and trustworthy an account of English utilitarianism is to be found. In so large a subject there are naturally points on which the reader may dissent from his judgment. For example, he seems to me to underrate considerably the importance of the legal and political aspects of Bentham's system. M. Guyau probably does not know the extent of Bentham's influence in England, not only on the scientific study of law but on the actual course of law reform and the general habit of modern legislation. Otherwise he would hardly be content with saying of Bentham : " Il a son mérite, comme le montre l'extrême influence qu'il a exercée sur la philosophie anglaise ". Great as Bentham's weight in English philosophy has been, it is only half his legacy to England, and perhaps the lesser half. Again, M. Guyau dismisses Grote's *Fragments on Ethical Subjects* with half-a-dozen lines, regarding these essays as a mere restatement of Bentham's doctrine. This appears to me a misconception. Grote's treatment of the development of conscience and its relation to the social sanction, his careful separation of the matter from the form of morality, and above all the constant predominance of the social point of view, mark in my opinion a distinct advance. It is particularly to be observed that Grote speaks little of greatest happiness, and less of the sum of the individual's pleasures, but much of the welfare of the society. No doubt his work is fairly on the lines of the older utilitarian school : at the same time it gives a hand, if I mistake not, to the newer endeavours of Herbert Spencer, Darwin, and Clifford, to connect ethical theory with the general body of scientific knowledge by means of the idea of evolution. Coming in date of publication after Mr. Darwin and Mr. Spencer had spoken, Grote's *Fragments* naturally failed to attract all the attention they deserved. But I think they will ultimately have a much more considerable place in the history of ethical science than M. Guyau assigns to them. To Mr. Sidgwick M. Guyau gives as many pages as he has given lines to Grote. What he says is fair enough as a summary, but not happy as a review. First he calls *Methods of Ethics* the last and fullest exposition of utilitarianism—an odd thing to say of a work that criticises existing schools all round, and holds aloof from every one of them—and then, as if on reflection finding the expectations raised by this description hardly satisfied, he calls it a great expenditure of ingenuity for slender results. He seems to overlook the eminently critical character of Mr. Sidgwick's book ; the first question is whether the

criticism is not worth having for its own sake. Pure criticism, however, is not congenial to French writers on philosophy (the only remarkable exception that occurs to me is M. Renan); and it must be allowed that Mr. Sidgwick has cultivated a naturally fine taste for pure criticism to a point at which few can share its pleasures. He seems now and then to find a positive luxury in suspense of judgment.

In explaining Mr. Herbert Spencer's ethical opinions M. Guyau had the unavoidable disadvantage of writing before the publication of *The Data of Ethics*. He has made a good use, however, of the other available materials, including of course the letter to J. S. Mill first published in Prof. Bain's *Mental and Moral Science*. Perhaps it would have been better not to cite anything from *Social Statics*, which does not belong to the series of works setting forth Mr. Spencer's matured doctrine, and in some respects is even opposed to his later conclusions. It is interesting to know what a competent and for this purpose sufficiently impartial observer from the outside thinks of the relation of Mr. Spencer's ethical theory to strict utilitarianism. He regards it as the crown and completion of the English empirical school: "Les systèmes de Bentham et de Stuart Mill tendent évidemment à s'absorber dans le système plus vaste de M. Spencer, qui leur laisse une place en son sein et les complète sans les détruire. C'est donc à tort, selon nous, que les partisans de l'utilité et les partisans de l'évolution continuent à former en Angleterre deux camps distincts." The fact of the separation existing for the present is not denied. M. Guyau's frank admission of the importance of the doctrine of evolution in its bearing on ethics must not be passed over: it might profitably be meditated by a good many would-be philosophers and critics here. "The hypotheses of evolution and natural selection," says M. Guyau, "have of late years attained such a degree of probability that we may look forward to the time when they will be as universally received as the Newtonian hypothesis of gravitation, for instance, already is. Hypotheses of this kind must be treated as facts proved or shortly to be proved. It becomes no less absurd to attempt to construct an ethical system without them than it would be to construct a system of astronomy on the hypothesis of the stars being immovable or the sun going round the earth."

Before saying anything of M. Guyau's criticism in detail, I should like to mention one point on which it seems to me to share a mistake not uncommonly made in ethical discussion. M. Guyau himself distinguishes the scientific from the practical side of morals. It is one thing to study the phenomena of human conduct with a view to scientific explanation, just as one studies any other set of phenomena —another to tell this and that man what in such and such circumstances he ought to do. Further, M. Guyau points out that while the analysis of moral feeling and action is a perfectly scientific problem, the practical rule of life always appears to elude science. This is in my opinion a remark of great importance, only M. Guyau himself does not give enough weight to it. For his subsequent criticism often assumes (as most criticism on the subject is wont to assume) that a

theory of ethics is bound to solve particular problems of conduct for particular persons, or at least to provide universal methods for solving them; and that every theory is a failure in so far as it cannot do this. Closely connected with this assumption we find another one which is often used with much rhetorical effect, namely, that practical morality depends on ethical theories. In the hands of certain writers, again, this is developed into the most confident demonstration that nobody has any business to be a commonly good man who does not accept the form of moral philosophy that happens to be favoured by the writer. Now this way of thinking involves a confusion which to me is so strange as to seem inexplicable: the only suggestion I can make towards accounting for it is that the immense practical interest of morality has made it very difficult to keep the scientific aspect distinct. For the better marking of the distinction, I would propose to appropriate the term 'Ethics' and its derivatives for the scientific analysis and exposition of conduct, whether on historical, physiological, or psychological grounds; and on the other hand to keep 'Morality' and the kindred group of words for the region of precept and command. Thus we have an art of morality existing, and cultivated with more or less success, in every society of men sufficiently advanced in the art of living to hold together at all, and a science of Ethics coming into existence and cultivated with more or less success when the society becomes sufficiently civilised to produce men who think systematically. Now the art obviously exists before the science; for morality must be well established before that security and leisure can be found which make ethical speculation possible. Again, ethical speculation arises just because morality is there as a subject-matter to be accounted for. Morality and its methods are therefore not dependent on Ethics, and the practical success of mankind in developing morality cannot depend on the success of philosophers in giving a satisfactory account of how it is done, or why they should do it. Unless indeed we suppose that men no sooner begin to philosophise than they cast away all their previous experience and govern themselves wholly by philosophical reasoning: but this (though even so it would apply to only a few) is manifestly contrary to the fact. The science of ethics arises in a moral community, as the science of optics arises among men who see, and physiology among men who breathe and eat and digest. I do not say that ethical theory has no influence on practical morality; it may have a good deal. Optics has given us telescopes and spectacles; physiology has given us rational medicine; and from ethics we learn much that is profitable for education and government. But a man of normal sight does not want optics to make him see; a man of sound organs does not want physiology to make him breathe and digest; nor does a right-minded man want ethics to make him know right from wrong. On the other hand, if abnormal sight is corrected by lenses, or abnormal conditions of organs by medicine and regimen, or moral infirmities by education and reformation, the result of the process depends on the knowledge of the persons who apply it, or by whose instruction it is used, not of those for whose benefit it is applied.

This being so, it seems to me irrelevant to object to a theory of ethics that it does not furnish us with a ready solution of this or that case of conscience. It is like objecting to Sir H. Maine's *Ancient Law* that it throws no light on unsettled points in the English law of real property. In the same way it does not sufficiently dispose of an ethical theory to say that it fails to give a rational demonstration of the "categorical imperative," or to assign a motive for right conduct which shall be efficient for all men in all circumstances. In fact it should seem obvious, as Mr. Balfour has lately pointed out, that no amount of reasoning can end in a command, much less in a command sure to be obeyed. The only imperative known to science is the hypothetical imperative which we may express (with Clifford, "Scientific Basis of Morals") in the form : "If you want so-and-so, you must do so-and-so". Science, again, can consider, may perhaps explain, why a normally constituted man wants, on the whole, to do what he perceives as *right*, and why he so often fails of so doing. But the absolute question—Why *should* I, or why *must* I do right?—is not a scientific question at all. Any seeming answer that can be given involves reference to some other standard, openly or tacitly assumed. And it will be found, I think, that these considerations apply with equal force to all ethical systems whatever. So M. Guyau seems to think too, though not quite on the same grounds ; for, while he fully and acutely criticises the English empirical school, he likewise at least inclines to the opinion that the *a priori* construction of a system of morals is an impossible task. If on the one hand the will of God, if on the other hand the furtherance of the greatest happiness, be assigned as the reason for doing right, in either case it remains possible to ask : But why should I do the will of God? Why should I seek the greatest happiness? And there is evidently no end to the process ; not even if the joys or terrors of a future life are thrown in to weight the balance in favour of morality. For it is notorious that the sanctions of heaven and hell are not always effectual even under the most favourable conditions. And this has been so far discovered by the practical instinct of mankind that the empirical connexion of specific precepts with specific sanctions has ever been treated by wise governors and educators as only a subordinate part of the cultivation of right-mindedness. Hence also many wise men have said in various ways that obedience to precepts is not righteousness, but only the beginning of righteousness. Righteous men are not they who obey moral precepts, but they whose conduct is the foundation of moral precepts. And therefore Dante said that the right mind is a law to itself :

Libero, dritto, sano è 'l tuo arbitrio,  
E fallo forà 'l non seguir suo cenno ;  
Perch' io te sopra te corono e mitrio.

But we may extract from the moral question, scientifically insoluble in that form, a number of properly scientific questions which are in divers ways implied in it. Such are these : What do I mean by *right*, what by *good*? Why do I want to do that which appears to me *right*? What account can be given of pleasure and desire, and of

their relation to the notions of good and right? How came the notion of right to be formed by me and my ancestors? Can it be accounted for by the facts of human experience? How far is it constant in form and in matter? These and such like questions constitute the subject-matter of ethical science. That they are worth answering, and that several generations of thinkers have found enough to do in answering them, will not be much disputed, at least by persons who take any sort of interest in philosophical inquiries. And we may perhaps be able to attend to them more closely and carefully if we can get rid of the flattering fancy that the morality of the civilised world hangs on our conclusions.

In M. Guyau's criticism there are not many points that will strike an English reader as in themselves new; and once or twice he falls into something like commonplace. It is hardly worth while now-a-days to assert, as if expecting utilitarians to deny it, that some kind of moral sense—however various its deliverances—is practically universal among all but the very lowest of mankind: in other words, that there is a roughly constant *form* of morality with all the variety of *matter*. Again, it is of little use to say: “*je désire le plaisir, je puis vouloir la douleur*,” unless you can show that “*vouloir la douleur*” does not imply the refined pleasure of the sense of power and independence. But M. Guyau is always intelligent, he is never violent or frivolous, and he gives unity to the subject by taking a connected view of the English school as forming a historical movement in ethical speculation. Bentham, J. S. Mill, and Herbert Spencer are the leaders he deals with almost exclusively. Bentham stands for pure thorough-going utilitarianism in its earlier form, as Bentham made and left it. J. S. Mill is taken as exhibiting an effort to expand Bentham's rigid framework and assimilate ideas from other quarters. Mr. Herbert Spencer has, in M. Guyau's judgment, pushed the empirical treatment of ethics to its fullest limits, and spoken the last and most complete word of the English school. And it is on Mr. Spencer that M. Guyau spends his main strength. Not that his criticism of Bentham and Mill is slight or careless; but to a certain extent he plays them off against one another. As against Bentham he urges the difficulty of establishing a quantitative scale of pleasures; as against Mill's proposal to compare pleasures in quality as well as quantity he uses in turn Bentham's weapons. On this last point one of his remarks is worth special notice. Mill speaks of preferring particular kinds of pleasure to others without any sense of moral obligation; but this involves an assumption which at least needs to be justified. What if the judgment that one pleasure is preferable *in kind* to another be itself a moral judgment, resting on a sense that the one pleasure is morally superior to the other? in which case the test of moral superiority as a source of rational preferableness would still remain to be investigated. Even æsthetic pleasures, which seem at first sight to afford the strongest evidence for Mill's theory (since it is very difficult to think of them as commensurable in quantity either with other kinds of pleasures or with each other), have on closer examination a quasi-moral

character. The sacrifice of an aesthetic for a non-aesthetic pleasure begets a feeling approaching remorse: "tout ce qui est beau semble revêtir un caractère moral." The objection that if quality of pleasures is to be counted no hedonistic calculus is possible, and moreover we cannot tell who is to decide, is also strongly made by M. Guyau, but seems of less weight. For we have no particular right to expect ethics to provide us with a moral calculus; nor would ethics be worse off than any other science in being unable to point out with exactness the body of competent persons whose consent ultimately decides on the acceptance of doctrines. It may be said that Mill's scale of quality, to be established by the majority of sufficiently instructed opinions, is only a more elaborate form of Aristotle's frank appeal to the judgment of the reasonable or right-minded man. But after all may not one do worse than be content with being no wiser than Aristotle on a practical point of this nature? For my own part I am disposed to think (but this by the way) that the merit of Aristotle's work in ethics has been much underrated in recent times.

Coming to Mr. Herbert Spencer, M. Guyau calls attention to the analogy between his doctrine and Spinoza's. With Spinoza all action, including moral action, springs from the principle of self-maintenance. Mr. Spencer investigates this principle further, and finds that maintenance implies progress; there is no conservation without evolution. "M. Herbert Spencer," says M. Guyau, using the term positivist in a large sense as equivalent to non-transcendentalist, "est une sorte de Spinoza positiviste"; a remark which, with due allowance for its epigrammatic form, is no less just than acute. For the rest, I think the contrast between Mr. Spencer's deductive treatment of ethics and the inductive treatment of earlier utilitarianism is rather over-stated by M. Guyau; perhaps it is a little too much insisted upon by Mr. Spencer himself in *The Data of Ethics*. Utilitarians have never, that I know of, proposed to substitute a calculation of pleasure and pain in each individual case for general moral rules, though superficial critics have often assumed that they do so. If there is to be a calculation, it is for the scientific establishment of the rule as a general rule. Nor have they generally explained and justified the rules of morality otherwise than by deduction from more or less general propositions about human pleasures and pains. Again, Mr. Spencer has now presented his ethical theory in a manner less divergent from the utilitarian tradition than might have been expected; for he expresses it as a form of hedonism. There is the great difference that he does not accept pleasure, or "preferable consciousness," as an ultimate fact either in itself or for the purposes of ethics, but seeks to explain it, and gives a certain ethical weight to the explanation. Still, the passage from utilitarianism pure and simple to Mr. Spencer's doctrine, sometimes named by himself "rational utilitarianism," is less abrupt than readers of his earlier works might expect. Thus it is very necessary for the student of M. Guyau's book to supplement his account by reference to *The Data of Ethics*, though the imperfection is no fault of M. Guyau's.

The chief objection to Mr. Spencer's theory made by M. Guyau is the general objection to all empirical or derivative systems of ethics. If morality has not an absolute value, but is valuable only as the means to some further end, how can you tell that in particular cases immoral conduct may not attain that end as well or better? "The justice you offer us is an abstract mechanical sort of justice, produced by the equilibrium of social forces; but to give us *this* justice, injustice may do as well as any other way, or sometimes better." The answer is simply that if injustice did serve as well, it would no longer be injustice. But it does not; and if proof of this be demanded, there is indeed no formal proof, but only because the proof consists of the whole experience of mankind ever since there has been human society. It is almost like the puzzle of proving the uniformity of nature. Again, M. Guyau asks: Even when you have got your general rules, how can you prevent any enterprising person from investigating their value for himself? Certainly we cannot prevent him, nor ought he to be prevented; though M. Guyau seems to think it a tenet of deductive utilitarianism that he ought. A general moral rule is, *prima facie*, binding on every member of society in every case covered by the rule; and if he simply obeys it, society cannot condemn him, though it may be seen by persons of exceptional moral insight that the rule itself was in that case inadequate. On the other hand, if he thinks he can improve the rule he is free to try, of course at his own risk. Society, for obvious reasons, looks with great suspicion on exceptions to moral rules discovered by particular persons in their own interest. An opposite presumption is made in favour of conduct which is against the agent's apparent interest, and is perhaps carried too far. M. Guyau complains that utilitarianism in its latest phase does not give us any fixed and universal rule for attaining the chief end, however defined, of moral action; but we may admit the fact, and deny that there is anything to complain of. What we learn from Mr. Darwin and Mr. Spencer is that moral rules are not fixed and universal in the sense required by intuitionists. Moralists in all ages have said, "Be just"; but the conceptions of justice, and of the persons to whom justice is due, have been through the history of civilisation becoming both wider and more determinate. The only absolute morality conceivable when we accept the evolution of moral feelings and relations as a scientific doctrine must be, as Mr. Herbert Spencer says, a body of rules which would be applicable in an ideal society; and the development of existing "relative morality" will then be regarded as an effort to approach as nearly as actual circumstances allow to the ideal requirements of "absolute morality". How far an absolute morality in this sense can be constructed with our present materials, and of what practical use it would be, it would be out of place to discuss here.

M. Guyau further objects to the explanation of inherited moral instincts given by Mr. Spencer and Mr. Darwin; not that, as a scientific explanation, it is not true or important for the natural history of man, but that it lacks moral efficacy. It reduces the moral sense to a sort of hallucination; if our moral feelings depend on our inherited nervous

modifications, we are patients in a state of *obsession* : " la moralité n'est qu'une transformation suprême de ces hallucinations normales qui se trouvent chez l'homme le plus sain et qui sont une condition de la santé même." M. Guyau does not specify these normal and healthy illusions ; does he mean such as, for example, our fixed belief of the reality of an external world, or our impression of seeing things in three dimensions ? So long as morality is as real as the world we live in, it may suffice most people for practical use. And again, " nous sommes des hallucinés, qui prennent leurs idées fixes pour des réalités ;" and the only advantage of the moral illusion is that it is useful. But I conceive there is a fallacy here. The moral sense cannot be a hallucination, for it is not a judgment or opinion at all. Conscience does not assert, it commands. And a command may be wise or foolish, but it cannot be true or false. The fact is there, however we explain it ; the only room for illusion is in our philosophical interpretation. But, again, it is suggested that if a man has thus accounted for his conscience as a piece of the natural history of mankind, he may deliberately set to work to get rid of it, and what if he succeeds ? It appears to me that this would be as hopeful an undertaking as if, having come to the conclusion that the fundamental assumptions of geometry have not the necessary, absolute, and universal kind of truth commonly ascribed to them, one should go to work to modify one's intuitions of space.

In his concluding chapter M. Guyau states quite frankly the difficulties of founding an ethical system on any transcendental assumption about free will. Transcendental propositions belong to a transcendental world, and avail nothing in the world of experience. " Le moi nouméral ne peut pas fonder la liberté du moi phénoménal ; or c'est cette liberté qui m'importe, et c'est la seule dont j'aurais besoin pour établir une morale." The alternative (besides utilitarianism) is to regard freedom not as a power or cause, but as an ideal. Thus understood, freedom is the realisation of the highest tendencies of one's own being, so far as these tendencies are determined by the nature and circumstances of the individual or race considered ; this doctrine of ideal freedom would coincide with the doctrine of evolution. But the striving towards freedom, self-development, perfection (all these are apparently equivalent from the proposed point of view) may be regarded as belonging not only to this and that individual and species, but to all living beings. Thus we should obtain an universal ideal of perfection, which would be the principal and sufficient cause of all rational action. I confess that this theory, save in so far as it is a repetition of Stoicism in modernised language, appears to me obscure ; and M. Guyau gives us to understand, though he does not stop to criticise, that he is not himself satisfied with it. At the same time, the theory of evolution as applied to moral feelings and action is calculated to bring into prominence under a new light the Stoic conception of " following nature " ; and also, as I think, to modify the notion of moral freedom very much in the sense indicated by M. Guyau.

F. POLLOCK.

## VIII.—NEW BOOKS.

[*These Notes are not meant to exclude, and sometimes are intentionally preliminary to, Critical Notices of the more important works later on.*]

*The Metaphysics of the School.* By THOMAS HARPER, S.J., Vol. I.  
London: Macmillan, 1879. Pp. lxxx., 592

In this volume, to be followed by three others, Father Harper begins a systematic attempt to present to the modern student the metaphysical doctrine of the School, as embodied in the manifold works of its greatest thinker, Thomas Aquinas. The general plan of the work is borrowed from the *Metaphysics* of Suarez, who was as conspicuous in his later time among the methodisers of the scholastic doctrine as St. Thomas had been among its unmethedical constructors. The modern expositor, however, being concerned only with the strictly philosophical doctrine, out of all reference to *supernatural* theology, does not follow Suarez in mixing up indifferently the problems of natural theology with those of finite being. Natural Theology is here to be reserved for separate treatment in the closing division of the work. He also does not retain Suarez' cumbrous form of 'Disputation' any more than Thomas's form of 'Question,' but is content to preserve the old scholastic system and order in its substance—throwing the matter into the form of Propositions or Theses, and, at the end of each, stating "the objections brought against it (if any such there be), one by one, together with an answer to each objection which immediately follows after the exposition of the difficulty." The great length to which the whole work will run is partly caused by the author's anxiety to make his subject plainer by a copious use of illustrations, but he protests against the notion that so stupendous a system of thought as St. Thomas's can be brought within the compass (as some one desired) of "a moderately sized octavo". And certainly, nobody will have a right to be anything but grateful to him if, even within four such big volumes as the present, he can tell the present generation all that he thinks it so much needs and is wistful to know of "that ancient doctrine [Aristotelian before it was Scholastic] which has stood the test of above two thousand years, and calmly holds its own spite of the unmeasured calumnies and copious scorn of interested adversaries". A large part of the author's long and sufficiently discursive Introduction is taken up with a forcible reply to some of these modern "calumnies". It is easy for him to prove that most of those who, from Hobbes downwards, have decried the School-philosophy, knew very little about it; and, only, there does not appear, on his own side, an intelligence of the reasons why, when a certain time came, the best heads, Catholic as well as Protestant, were naturally diverted from it, and might easily pass into the mood of undiscriminating or ignorant depreciation. However, before venturing such a remark about Father Harper's appreciation of Modern Philosophy and

Science, it might be both fairer and wiser to wait for his Second Volume, in which he hopes to convince the reader that St. Thomas's "teaching with regard to the genesis of the material universe, the primordial constituents of bodies and the generation of man harmonises wonderfully with the inductions of modern experimentalists". Of the nine books that will form the whole work, the present volume covers three: (1) of the Definition of Metaphysics, (2) of Being, (3) of the Transcendental Attributes of Being. In the remaining volumes will be treated, in succession, (4) the Principles of Being, (5) the Causes of Being, (6) the Primary Determinations of Being, (7) and (8) the Categories of Aristotle, (9) Natural Theology. A Glossary of Scholastic terms used in the present volume is given at the end (pp. 571-89), to be added to, as there is occasion, in the later volumes.

*The Emotions.* By JAMES McCOSH, D.D., LL.D., President of Princeton College. London : Macmillan, 1880. Pp. 255.

As Dr. McCosh explained in a Note in MIND VII., which reappears with some slight change as the Introduction to the present volume, there are in his view four elements involved in emotions : (1) An affection, motive principle or appetence ; (2) an idea of something as fitted to gratify or disappoint a motive principle or appetence ; (3) a conscious feeling ; (4) an organic affection. Nobody, he thinks, has previously given due prominence to all these elements at the same time. (1) The Primary Appetences, forming the basis of all emotion, are, according to him, the following : Love of Pleasure and Aversion to Pain, Promoting Good of others, Personal Attachments, Tastes and Talents tending to act, Bodily Appetites, Love of Society, Love of Esteem, Love of Power, Love of Wealth, *Æsthetic* Feeling, Moral Sentiment. (2) These being gratified or disappointed by *objects*, the Ideas calling forth emotions are of the nature of Phantasms—not abstract or general notions, though it is not meant that the representation is always of strictly individual objects ; aggregates or collections of individuals, being concrete, and whatever is associated with individual things are equally appetible or inappetible. Then comes (3) the fact of Conscious Excitement, in the form either of Attachment or Repugnance—a mental act accompanied by, but never to be confounded (as Dr. McCosh thinks it commonly is confounded by "physiologists") with (4) the Organic Affection, "the seat of which seems to be somewhere in the cerebrum whence it influences the nervous centres, producing soothing or exciting and at times exasperating results." Having given in Book I. his detailed account of these "Elements," the author proceeds in Book II. to the "Classification and Description of Emotions." Fixing upon the Idea involved in all emotion as the ground of distribution, he makes a fundamental division of Emotions as directed to (1) Animate or (2) Inanimate Objects. The former class is further subdivided (after Thomas Brown) into (*a*) Retrospective, (*b*) Immediate and (*c*) Prospective Emotions according as the "ideas" are considered as directed to the past, present or future ; and further under each head distinction

is made of the *egoistic* or *altruistic* reference of the feeling. The second main class coincides with all those emotions usually designated *Æsthetic*. Finally, in Book III., the "Complex Emotions" are dealt with, meaning those continuous modes that have been called Affections, Passions, &c.

The author starts upon his whole inquiry with a complaint that the word Feeling is made to "embrace two such different mental properties as Sensation, on the one hand, and Emotion, as of fear, hope, grief and anger, on the other." Declaring it, thereupon, "desirable to have the emotions separated from the feelings," he apparently identifies Feeling with Sensation; but this does not hinder him from finding the central fact of Emotion to be "a conscious feeling," and generally from using the words Emotion and Feeling as interchangeable. If it be true, then, as he further says in his preface, that "the vagueness of the idea" of Feeling "favours the tendency on the part of the prevailing physiological psychology of the day to resolve all feeling, and our very emotions, into nervous action, and thus gain an important province of our nature to materialism," it is difficult to see how his own use of the word can prevent that consequence. The book, as a whole, can hardly be said to throw any new light on the subject, but it contains many interesting observations, and is pleasantly written.

*Introduction to the Science of Language.* By A. H. SAYCE, Deputy Professor of Comparative Philosophy in the University of Oxford. 2 vols. London: Kegan Paul, 1880. Pp. viii., 441, 421.

This "attempt to give a systematic account of the Science of Language, its nature, its progress, and its aims," appeals to the philosophical hardly less than to the philological student. The author begins with a survey of "Theories of Language," going back to the traces of the first reflective efforts of Babylonian and Assyrian grammarians, and bringing down the account to the latest philosophical speculations of German origin. He then opens up, in a long chapter, his own view of "The Nature and Science of Language," defining Language provisionally as "consisting of certain modulations of the voice, variously combined and arranged, which serve as symbols for the thoughts and feelings we wish to express"; and urging more particularly that, as the Sentence is the unit of significant speech, its different forms, "that is to say, the different modes in which the relations of subject, object, and verb are denoted will constitute the only sound basis for classifying speech". "The three Causes of Change in Language"—Imitation, Emphasis, Laziness—are next set forth at length in a separate chapter, followed by five others constituting the main body of the work. These (with various appendices) treat, in order, of "The Physiology and Semasiology of Speech (Phonology and Sematology)," "The Morphology of Speech," "Roots," "The Inflectional Families of Speech," "The Agglutinative, Incorporating, Polysynthetic, and Isolating Languages". Two chapters of a more general character complete the work, entitled "Comparative Mytho-

logy and the Science of Religion," "The Origin of Language, and the relation of the Science of Language to Ethnology, Logic, and Education". In the last, he maintains, as the outcome of all the successive inquiries directed to the question of origin, that Language is now seen to be "the product not of one cause, but of a combination of several. Grammar has grown out of gesture and gesticulation, words out of the imitation of natural sounds and the inarticulate cries uttered by men engaged in a common work or else moved by common emotions of pleasure and pain." Such as it is, "the faculty of speech, whether exercised or unexercised, is the one mark of distinction between the man and the brute. All other supposed marks of difference—physiological, intellectual, and moral—have successively disappeared under the microscope of modern science. But the prerogative of language still remains, and with it the possession of conceptual thought and continuous reasoning." True, "the difference between the beginnings of language which we detect in animals and the first attempts at speech in early man is but a difference in degree; but differences of degree become in time differences of kind". As regards Logic, Professor Sayce would contend (after Mr. Sweet) that that science (meaning formal logic) is in an evil case—both suffering itself and harming the science of language—so long as its professors do not recognise that it must be based on the essential principles of language as made out by general linguistic science, instead of reflecting the grammatical forms of a particular speech, misinterpreted, too, as these were by ignorant Greek grammarians. Professor Sayce does not sufficiently develop his view; but when it is said that "had Aristotle been a Mexican, his system of logic would have assumed a wholly different form," the obvious remark occurs that Aristotle might still be doing a very useful and necessary work in devising a logic accommodated to the kind of language in which he actually thought, and that those whose speech is of the same fundamental type may find their profit in continuing to regulate their thinking by means of that logic. The two volumes are marked by great freshness and vigour of thought.

*Aristotle.* By GEORGE GROTE, F.R.S., &c. Edited by Alexander Bain, LL.D., and G. Croom Robertson, M.A. Second Edition with Additions. London: Murray, 1880. Pp. xiii. 681.

"This Edition is an exact reprint of the First Edition [1872], with the addition of two important Essays on the *Ethics* and *Politics* of Aristotle, which were found among the author's papers. They were originally published in 1876, in *Fragments on Ethical Subjects*, but would have been included in the First Edition of this work, had they been discovered in time."

*Teutonic Mythology.* By JACOB GRIMM. Translated from the Fourth Edition, with Notes and Appendix, by James Steven Stalybrass. Vol. I. London: Swan Sonnenschein and Allen, 1879. Pp. viii., 437.

The translation of Grimm's standard work is here begun by a man

who brings exceptional qualifications to the performance of an exceptionally difficult task. Two more volumes will follow, the last including not only Grimm's own Appendix to his second and third editions, but also, in a carefully digested form, the Supplement added in the fourth edition, after Grimm's death, from his note-books, by Professor E. H. Meyer.

*The A. B. C. of Philosophy.* A Text-book for Students. By THOMAS GRIFFITH, A.M., Prebendary of St. Paul's. London : Longmans, 1880. Pp. 132.

"This volume owes its origin to two deep convictions. First, that the Philosophy of an age materially affects the thought of that age. And next, that true Philosophy can neither be understood in itself, nor help us to the understanding of the false, unless we study it systematically as an organic whole." . . . The aim as regards the second conviction "is not to throw out fragmentary scraps of knowledge, but to evolve in regular succession, from the earliest germs of thought, the gradually ripening growths of truth. Beginning with those concomitant phenomena which beget the notion of Extension in Space (the Statics of Psychology), and proceeding to those consecutive phenomena which beget the notion of Change in Time (the Dynamics of Psychology), our investigation culminates in those phenomena of co-ordination which proclaim the presence, both in Space and Time, of an adjusting, harmonising, unifying Mind." The work is in five chapters :—The Necessity of Philosophy ; The Problems of Philosophy ; Matter ; Motion ; Mind ; followed by an Appendix of Notes and Authorities.

*Path and Goal.* A Discussion on the Elements of Civilisation and the Conditions of Happiness. By M. M. KALISCH, Ph. D., M.A. London : Longmans, 1880. Pp. 510, 138 (Notes).

A discussion among a number of men of different races brought together under the roof of a descendant of a family of Spanish Jews in London. The subjects are the following :—The Book (of Ecclesiastes) ; The Cynic and the Stoic ; The Stoic and the Christian ; Epicurus and Darwinism ; The Dignity of Man ; God, Soul, Immortality ; Immortality ; Pantheism ; Pessimism ; Idealism and the Goal.

*The Academics of Cicero.* Translated by JAMES S. REID, Fellow and Assistant Tutor of Gonville and Caius College, Cambridge. London : Macmillan, 1880. Pp. 107.

A translation intended to form an adjunct to a revised issue of Mr. Reid's edition of the Latin text, with explanatory notes, now in the press, but first published separately for a special academic reason, and also because he thought "a trustworthy rendering of this important book might prove to have some interest and value for those whose special study is philosophy rather than classics".

"I am aware (adds the translator) that for such students the history of ancient thought has hitherto practically closed with the name of Aristotle. But it is, I think, beginning to be felt, in Germany at least, that the vast historical importance of the post-Aristotelian systems entitles them to more

attention than they have hitherto received. In any case, whatever may be thought of the later Greek speculation as a whole, the controversy presented to us in Cicero's *Academics* is one which ought to possess an enduring interest for the modern student of philosophy. Though the struggle between philosophic scepticism and philosophic dogmatism covered a much smaller field in ancient than it has occupied in modern times, it yet opened up to the ancients problems which are being discussed to-day as vigorously as they were discussed then. There is no ancient work (if we exclude the writings of Sextus Empiricus) which presents to a greater extent than the *Academics* points of resemblance to the modern literature of philosophy."

An Introduction (pp. 5) and a number of Notes (pp. 15) "are intended to smooth the chief difficulties likely to stand in the way of a modern reader".

*History of Materialism and Criticism of its Present Importance.* By FREDERICK ALBERT LANGE, late Professor of Philosophy in the Universities of Zürich and Marburg. Authorised Translation by Ernest Chester Thomas, late Scholar of Trinity College, Oxford. In Three Volumes. Vol. II. London: Trübner, 1880. Pp. 397.

The present volume of this careful translation of a very important book includes the Materialism of the 18th century, the Movement of Modern Philosophy from Kant, and part of the section entitled by Lange "The Natural Sciences". The publication has been delayed by the Translator's illness, but the third and concluding volume will very speedily follow.

*La Logique de l'Hypothèse.* Par ERNEST NAVILLE, Correspondant de l'Institut de France. Paris: Germer Bailliére, 1880. Pp. 288.

The author first conceived the idea, in studying the philosophy of Bacon, as far back as 1844, that both Bacon and Descartes erred in not seeing that, though observation and reasoning are the indispensable conditions of a discovery, yet the discovery itself has a spontaneous character and always begins in the form of a supposition. Twenty years later the idea was confirmed in the course of metaphysical inquiries, and the author was under the impression that he had made a distinct advance in logical theory. On going further, indeed, he found that others, notably Claude Bernard, Liebig, Chevreul and Whewell, held similar views, and that long previously Galileo had explicitly recognised the place of hypothesis in science. Still it seemed that nobody had yet affirmed the presence of hypothesis in all the elements of science without exception. This thesis which, the author thinks, must profoundly modify the theory of method, he has more than once sought to maintain in courses of public lectures at Geneva; and the present work now embodies the mature results of his thought on the subject. Notwithstanding the importance he assigns to hypothesis, however, his purpose, in view of the state of thought at the present day, is rather to control than to encourage its

exercise. "The special character of the present movement of thought is that the systematic spirit presents itself in the false guise of empiricism. Simple hypotheses are no longer taken, as by Descartes, for deductions *a priori*; but they are regarded as solid inductions, as theories definitively established. . . . Now the logic of hypothesis keeps us from forgetting that our scientific ideas are ever in their origin anything but suppositions, or have any other value than what they draw from confirmation by experience." The work is in three parts: (1) "The Place of Hypotheses in Science"; (2) "The Conditions of Serious Hypotheses"; (3) "Directing Principles of Hypotheses"; followed by a number of solutions of particular difficulties raised on occasion of the author's courses of lectures.

*De l'Invention dans les Arts, dans les Sciences et dans la Pratique de la Vertu.* Par E. JOUAN, Docteur-és-Lettres, Ancien Élève de l'École Normale. Paris: Germer Baillière, 1879. Pp. 213.

The author is here concerned about Imagination, not as the reproductive faculty whose mode of working has been carefully investigated and is well understood, but as the creative faculty which has generally been held to elude all definite investigation and to be subject to no determinate law. He would treat the reproduction of images, according to the commonly recognised laws of association, under the head of Memory, and reserve the name Imagination for the quite different tendency, inherent to the mind, whereby it is borne spontaneously from one sentiment, thought or action, to another sentiment, thought or action, logically connected with the former. The law involved is that which several philosophers, including Hume, have noted in passing but never brought fully to light; namely, that often, if one idea arise after another in the mind, it is because there is between them a relation of cause to effect, of principle to consequence, of means to end. In the author's view, it is a profound error to oppose Imagination and Reason to one another. Everything suggested by the creative imagination gives full and entire satisfaction to the reason. The two faculties are identical and differ only in our way of looking at them: "Imagination is the mind's faculty of making progress; Reason is the knowledge we have of the laws of our progress". The scope of the author's whole inquiry is thus described by himself:—

"We shall first show that there is in us a natural tendency to pass spontaneously and without external stimulus from one psychological phenomenon—sentiment, thought, or action—to another which is the logical consequence of the first; we shall endeavour to explain the existence of this inclination; we shall indicate the principal opposing forces that arrest or divert its development; finally we shall show how in certain men and at certain moments the intellectual activity surmounts this or that obstacle and realises this or that progress.

"We shall then examine the methods followed by men in the study of the sciences—physics, natural history, mathematics; we shall consider the arts and the practice of virtue; we shall see that all our discoveries, all our

forward steps, are due to the creative imagination whose mode of action and law are ever the same.

"Finally, we shall come to the examination of the products of imagination—true scientific theories, beautiful works, good actions. Everywhere we shall remark the same characters—an extreme simplicity and a great logical rigour."

*La Physiologie de l'Esprit.* Par F. PAULHAN. Avec 10 Figures dans le texte. "Bibliothèque Utile". Paris: Germer Baillière. Pp. 190.

The reader has here, for sixpence, in handy pocket-form, a remarkably good summary of the main results of recent psychological inquiry. After an Introduction, setting out with great clearness the relation of Psychology, as now understood, to general Philosophy, the little work is disposed in five chapters entitled (1) The Nervous System and Mind, (2) Statical Study of Mind, (3) Dynamical Study of Mind, (4) Organisation of Mind, (5) Summary and Conclusion: a Question of psychological Philosophy [the Relation of Mind and Matter].

*Logik. Eine Untersuchung der Prinzipien der Erkenntniß und der Methoden wissenschaftlicher Forschung.* Von WILHELM WUNDT, Professor an der Universität zu Leipzig. Erster Band. *Erkenntnißlehre.* Stuttgart: Enke, 1880. Pp. 585.

A book by Professor Wundt, even on Logic, will naturally attract a good deal of interest, and a critical notice of the present work will be given in this journal, probably in the next number. As preliminary, it will be sufficient to say of its general tendency that the Formal aspect of the Science is here distinctly treated as subordinate to the investigation of Material Truth. The author's course is directed mid-way between the two dangers of the purely Formal view on the one hand, and the 'Metaphysical or Dialectical' on the other: Formal Truth is not taken to be the limit of Logic's interest, nor on the other hand is the (more or less concealed) assumption of identity between Thought and Existence considered fit to serve as a foundation. The justification, as well as the building-ground, of Logic, is found in the methods of the separate sciences. 'Scientific' Logic, as thus opposed to Formal and to Metaphysical, is a *part* of Philosophy—neither outside it, nor coincident with it. Logic and Metaphysics are regarded as the two halves of theoretical Philosophy, Logic being that part which stands in the closer relation to the separate sciences. The whole system is divided, in the first place, into (Vol. I.) *Erkenntnißlehre*, and (Vol. II.) *Methodenlehre*. In the present volume, first in order comes an examination of the psychological foundations of Logic and *Erkenntnißtheorie*; next, a treatment of the Logical Forms; and finally a discussion of the Principles of Knowledge. Out of these three subjects are made six divisions of the book:—(1) On the Development of Thought; (2) On Notions; (3) On Judgments; (4) On Syllogistic Forms; (5) On the First Principles of Knowledge; and (6) On the Laws of Knowledge. The author shows himself, in more than one point, anxious to meet the prejudices or disabilities of

the individual reader half-way : those who feel dissatisfied with Prof. Wundt's arrangement of the subjects can, if they like, take the discussion of the First Principles and the Laws of Knowledge before that of Notions, Judgment, and Syllogistic Forms ; and non-mathematical students may have comfort in the fact that Symbols are relegated to two separate chapters, which may be entirely omitted without detriment to the course of their study of the work. The psychology at the beginning will naturally render the book attractive to all who recognise the chief services to science and philosophy with which Prof. Wundt's name is commonly coupled ; while most of the fifth and sixth parts, and especially the two last chapters (on Causation and Teleology), will be found useful to those also whose interest in these subjects is general rather than special.

[A. S.]

*Begriffsschrift, eine der arithmetischen nachgebildete Formelsprache des reinen Denkens.* Von Dr. GOTTLÖB FREGE, Privat-docenten der Mathematik an der Universität Jena. Halle : Neibert, 1879. Pp. x, 88.

Dr. Frege's work seems to be a somewhat novel kind of Symbolic Logic, dealing much more in diagrammatic or geometric forms than Boole's. A certain arrangement of horizontal and vertical lines connected with letters or symbols expresses the truth or falsity of propositions involving those letters or symbols ; the latter by themselves standing for terms or combinations of terms.

Symbolic systems are, I know, very difficult to judge by those unfamiliar with them ; they will almost necessarily appear cumbrous and inconvenient to those who have been accustomed to make use of some different system. But, making all due allowance for these considerations, it does not seem to me that Dr. Frege's scheme can for a moment compare with that of Boole. I should suppose, from his making no reference whatever to the latter, that he has not seen it, nor any of the modifications of it with which we are familiar here. Certainly the merits which he claims as novel for his own method are common to every symbolic method. For instance, he complains that logicians have not duly employed distinct sets of symbols for terms and for operations, and he makes use of letters and of lines for this purpose : in which there would seem no novelty surely to any one who had met with such expressions as  $x(y+z) = xy + xz$  as significant of logical operations. Similarly he calls attention to the fact that, on his scheme, the distinction, so important in grammar and on the predication-view of ordinary logic, between subject and predicate loses all its significance, that hypothetical and disjunctive propositions become equivalent to categorical, and so on ; all these being points which must have forced themselves upon the attention of those who have studied this development of Logic. I have not made myself sufficiently familiar with Dr. Frege's system to attempt to work out problems by help of it, but I must confess that it seems to me cumbrous and inconvenient.

[J. V.]

*Der Realismus der modernen Naturwissenschaft im Lichte der von Kant und Berkeley angebahnten Erkenntnisskritik.* Kritische Streifzüge von Dr. ANTON VON LECLAIR. Prag : Tempsky, 1879. Pp. ix., 282.

Herr von Leclair's book must be pronounced rather a piece of patch-work. The substance of it, an essay on the idealist view as opposed to modern scientific realism, extending over pp. 1-73, is a brief, partly polemical, partly expository, statement of the Berkeleyan *v.* Kantian doctrine regarding the object of perception. So far as critical investigation of the theoretical assumption of natural science is concerned, Leclair's result does not differ from, while his method is distinctly inferior to, that contained in the late Professor Herbert's work, noticed in MIND XVI. The greater part of the work, pp. 77-273, is taken up with long extracts from various scientific or philosophical writers, interspersed with criticisms and raising some questions of interest, but on the whole quite superfluous in quantity. [R. A.]

*Gedanken über die Socialwissenschaft der Zukunft.* Von PAUL V. LILIENFELD. Vierter Theil : "Die sociale Physiologie". Mitau : Behre, 1879. Pp. 496.

The author continues in this fourth volume the comprehensive work whose earlier parts were mentioned in MIND IX., p. 152. His present subject is "the establishment and elucidation of the Laws of Development of the Social Organism from the physiological point of view".

*Die Frage nach der geschichtlichen Entwicklung des Farbensinnes.* Von Dr. ANTON MARTY, a.o. Professor der Philosophie an der k. k. Universität zu Czernowitz. Wien : Gerold's Sohn, 1879. Pp. 160.

This is a remarkably methodical and interesting investigation of the question of the historical development of the colour-sense. Occupying himself more especially with the question of *historical* development in man, the author is led to substantially the same conclusions as have been enunciated in this country by Mr. Grant Allen and others. All the direct evidence, deductive or historical, leaves, he thinks, no doubt that the cultivated nations of antiquity and previous races of men possessed a fully developed colour-sense. But the power of *judging* colours and the interest in *naming* them have been only slowly developed ; there has also been a transformation of *feeling* for colours. The author makes a rather elaborate psychological analysis in defence of this position, and also enters at some length into the aesthetical question of poetic diction as regards the language of Homer, &c. So far as he raises the question of previous development in the lower animals, before the power of distinguishing colour-qualities was attained and passed on in constant fashion, he argues that the development did not take place in the order from red to violet, as Geiger and Magnus have supposed it in man ; also that it was determined by variation and natural selection rather than, as these again supposed, by individual adaptation under the influence of light. The author, in his arguments, adopts the newer classification of colours put forward by Mach and Hering.

## IX.—MISCELLANEOUS.

WE call attention (in connexion with an advertisement on the cover of the present number) to a scheme for the popularisation of Philosophy, and the diffusion of accurate though condensed information regarding the principal philosophers of modern times, projected by Professor Knight of St. Andrews University, and to be carried out by the Messrs. Blackwood, the publishers of "Ancient and Foreign Classics for English Readers". The following extract from the prospectus will indicate the nature of the scheme :—

"The aim of this Series will be to tell the general reader—who cannot possibly peruse the entire works of the Philosophers—who the founders of the chief systems were, and how they dealt with the great questions of the Universe; to give an outline of their lives and characters; to show how the systems were connected with the individualities of the writers, how they received the problem of Philosophy from their predecessors, with what additions they handed it on to their successors, and what they thus contributed to the increasing purpose of the world's thought and its organic development; as well as to illustrate the questions that engrossed them in the light of contemporary discussion.

"The Series will thus unfold the History of Modern Philosophy under the light cast upon it by the labours of the chief system-builders. In each work it will be the aim of the writers to translate the discussion out of the dialect of the Schools, into the language of ordinary life. If the philosophical achievements of such writers as Descartes, Spinoza, Bacon, Hobbes, Locke, Leibnitz, Butler, Berkeley, Hume, Kant, Fichte, Hegel, Comte, and Hamilton (not to refer to other names), were thus recorded,—and the discussion popularised without being diluted,—it is believed that the Series would form a useful assistance to the student of Philosophy, and be of much value to the general reader."

THE *Revue Philosophique* of January has the following note :— "The Academy of Moral and Political Sciences (philosophical section) had to nominate a foreign associate in place of Professor I. Fichte. It might have chosen amongst Messrs. Spencer, Bain, Wundt, Hartmann, &c.; it did elect M. Vincenzo di Giovani, professor in the Archiepiscopal Seminary of Palermo."

THE JOURNAL OF SPECULATIVE PHILOSOPHY.—Vol. XIV. No. 1. 'Kant's Critic of Pure Reason, criticised and explained by himself' (tr. from *Proleg.*, App.) M. Tuthill—'The Method of Thought'. J. H. Stirling—'Professor Caird on Kant'. E. Caird—'Kant's Deduction of the Categories, with special relation to the views of Dr. Stirling'. Notes and Discussions. Book notices.

REVUE PHILOSOPHIQUE.—Vme Année, No. 1. A. Espinas—'Le sens de la couleur : son origine et son développement' (I.). G. Séailles—'Philosophes contemporains : M. Vacherot' (I.). E. Boirac—'Les problèmes de l'éducation'. Notes et Documents (Dr. S. Wilks—'Notes sur l'histoire de mon perroquet, &c.'). Analyses et Comptes-rendus (H. Spencer, *The Data of Ethics*; A. Macfarlane, *Principles of the Algebra of Logic*, &c.). Rev. des Périod. Programme des cours de philosophie dans l'enseignement supérieur en France. No. 2. J. Delboeuf—'Le sommeil et les rêves. II. Leurs

rapports avec la théorie de la mémoire'. A. Espinas—'Le sens de la couleur, &c.' (fin). G. Séailles—'Philosophes contemporains : M. Vacherot' (fin). Analyses et Comptes-rendus. Notices bibliographiques. No. 3. V. Brochard—'La loi de similarité dans l'association des idées'. D. Nolen—'Les maîtres de Kant. III. Kant et J. J. Rousseau'. P. Tannery—'Thalès et ses emprunts à l'Égypte'. Notes et Documents (M. Guyau)—'La mémoire et le phonographe'; Dr. P. Despine—'Le somnambulisme de Socrate'. Analyses et Comptes-rendus (C. S. Wake, *The Evolution of Morality*, &c.). Rev. des Périod.

LA CRITIQUE PHILOSOPHIQUE.—VIII<sup>e</sup> Année, Nos. 46-52; IX<sup>e</sup> Année, Nos. 1-5. C. Renouvier—'De la méthode en histoire de la philosophie' (46); 'Les labyrinthes de la métaphysique : Le déterminisme et le libre arbitre—Malebranche' (47); 'L'évolution et le transformisme dans la philosophie de l'antiquité' (51); 'Le déterminisme stoïcien et ses adversaires' (1); 'La doctrine d'Épicure d'après M. Guyau' (50); 'Les origines et l'évolution de la famille suivant M. Spencer' (2); 'Kant et Schopenhauer : Le principe de l'obligation en morale' (2); 'L'infini de l'espace et du temps dans la métaphysique de M. Lotze' (3); 'La question du temps infini dans la métaphysique de M. Lotze' (45). J. Milsand—'L'envers du positivisme' (49); 'L'évolutionnisme et la mythologie aryenne : L'idolâtrie des ressemblances' (50); 'Le côté moral de l'évolutionnisme' (52); 'Une causerie : Comment se transmettent les convictions qui influent sur la vie' (4); 'Le spiritualisme et le positivisme' (5). F. Pillon—'L'acquisition du langage selon M. Taine' (51); 'un livre de bonne foi (Savatier-Laroche, *Études Morales*)' (3). Bibliographie.

LA FILOSOFIA DELLE SCUOLE ITALIANE.—Vol. XX. Disp. 3. La Direzione—'Ai Lettori'. T. Mamiani—'Filosofia della realtà'. G. Iandelli—'Del sentimento'. M. Panizza—'Antropologia: La fisiologia del sistema nervoso nelle sue relazioni coi fatti psichici'. Bibliografia. Vol. XXI. Disp. I. F. Bonatelli—'Del Sogno'. T. Mamiani—'Della filosofia francese contemporanea'. F. Ramorino—'Di alcune argomentazioni contenute nel *Protagora di Platone*'. Bibliografia.

ZEITSCHRIFT FÜR PHILOSOPHIE, &c.—Bd. LXXVI. Heft 1. E. Rehnisch—'Zur Kritik herkömmlicher Dogmen u. Anschauungsweisen der Logik, insbesondere des Lehrstücks vom Schluss'. J. B. Weiss—'Untersuchungen über F. Schleiermacher's Dialektik (II. ii. 2). W. Wiegand—'Leibniz als Religions-Friedensstifter'. Recensionen. Nekrolog (A. Jung—'Immanuel Hermann v. Fichte'). Bibliographie.

ZEITSCHRIFT FÜR VÖLKERPSYCHOLOGIE U. SPRACHWISSENSCHAFT.—Bd. XI., Heft 4. F. Misteli—'Lautgesetz u. Analogie : Methodisch-psychologische Abhandlung'. Beurtheilung.

PHILOSOPHISCHE MONATSHEFTE.—Bd. XV. Heft 10. A. Stadler—'Kant u. das Prinzip der Erhaltung der Kraft'. E. v. Hartmann—'Ist der Pessimismus wissenschaftlich zu begründen?' Recensionen (Flint, *Antitheistic Theories*; &c.). Litteraturbericht. Bibliographie, &c. Bd. XVI. Heft 1, 2. G. Knauer—'Seele u. Geist' (I. II.). J. Baumann—'Historische u. kritische Bemerkungen zum Zweckbegriff'. H. Vaihinger—'Die Erdmann-Arnoldt'sche Controverse über Kant's Prolegomena'. Recensionen. Litteraturbericht. Bibliographie, &c.

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE.—Bd. IV. Heft 1. E. Laas—'Die Causalität des Ich, (I.). F. Tönnies—'Anmerkungen über die Philosophie des Hobbes' (II.). Schmitz-Dumont—'Zur Raumfrage'. A. Spir—'Drei Grundfragen des Idealismus: II. Von dem Unterschied zwischen der normalen und der empirischen Natur der Dinge'. Recensionen (H. Sidgwick, *The Methods of Ethics*, "Ethics" in *Encyclopædia Britannica*) Entgegnungen (A. Horwitz, W. Wundt, 'Die Priorität des Gefühls'; W. Wundt, 'Bemerkung zu dem Aufsatz des Herrn B. Erdmann "Zur zeitgenössischen Psychologie in Deutschland"'). Selbstanzeigen.